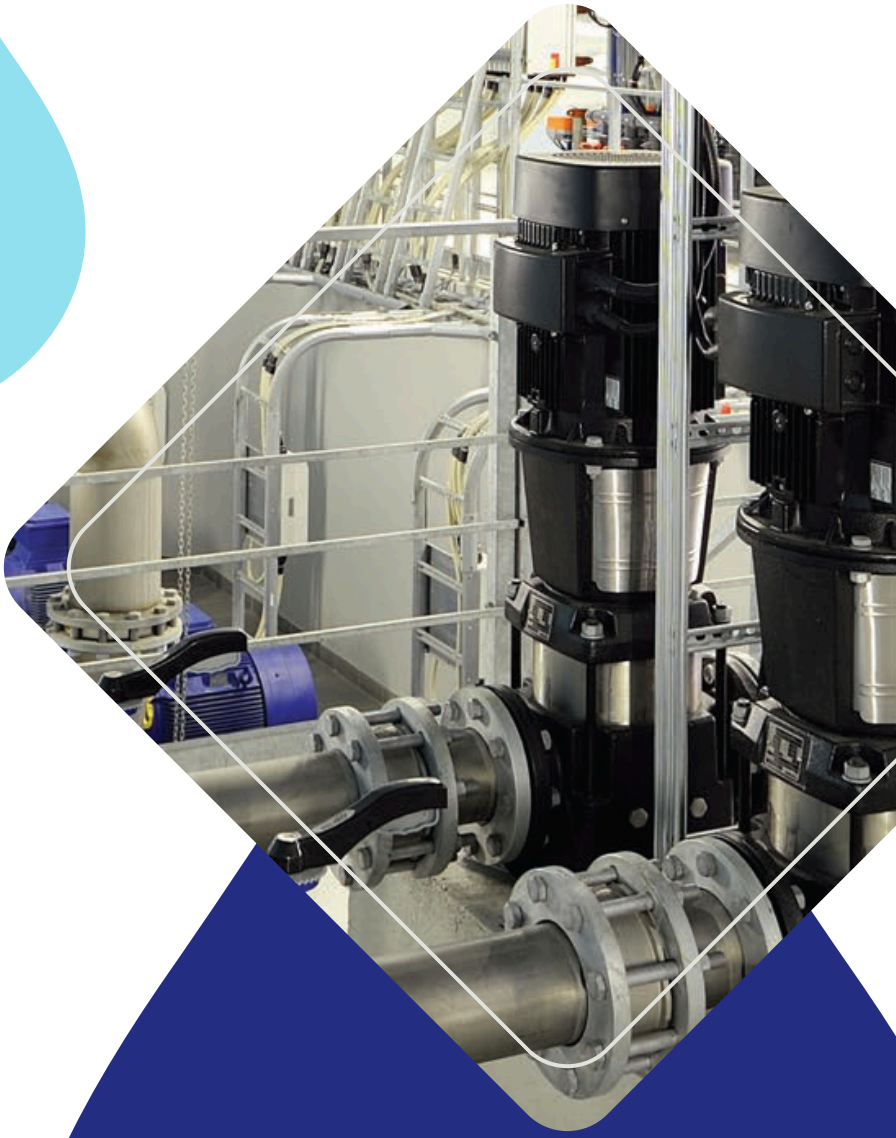
610.275.4453

Plumbing & Heating
Pumps
Water Conditioning
Multifamily Housing Supplies



DUFF CO. CATALOG

PUMPS

est. 1947

DUFF CO.

When you need it now... or don't know how

DUFFCO.COM

DUFF SUMP PUMPS AND CONTROLS

Duff submersible and pedestal sump pumps are designed to pump any basement drainage water and residential flooding.

TOOLS AND MATERIALS NEEDED FOR SUBMERSIBLE OR PEDESTAL SUMP PUMP INSTALLATION

* Duff hose kit or PVC pipe and cement (or galvanized pipe)
* PVC adapter (same size as PVC/ABS pipe)
* Check valve
* Plastic, fiberglass or concrete sump basin
* Screwdriver, pipe wrench, adjustable wrench (med.-large)
* Hacksaw with 24-tooth blade for cutting plastic pipe
* Knife or round file for smoothing inside of plastic pipe connections.

Myers®

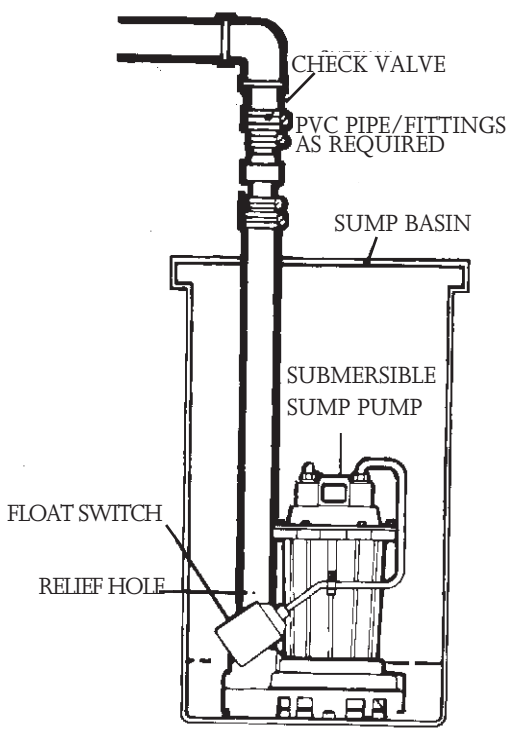
STA-RITE®

LittleGIANT®

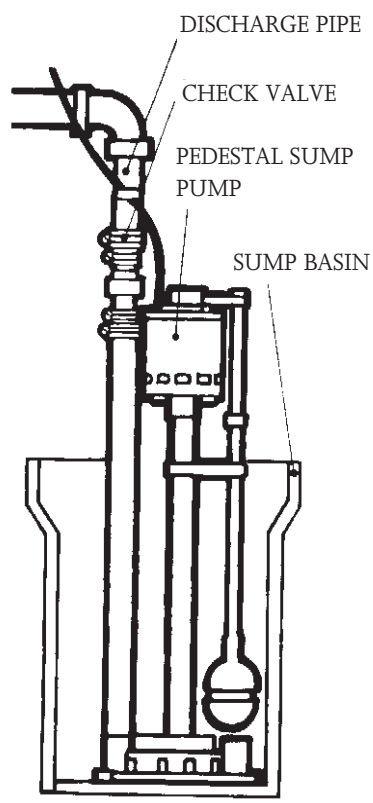
Franklin Electric

Pentair

BASIC SUBMERSIBLE SUMP PUMP INSTALLATION



BASIC PEDESTAL SUMP PUMP INSTALLATION



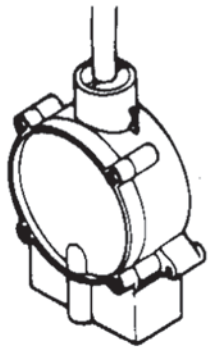
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

SUMP PUMP CONTROLS

Super Single Sump Pump Piggyback Switch



FIG. NO.	Voltage
10874	115V
10878	230V



LITTLE GIANT LOW LEVEL DIPHRAGM SWITCH

Converts any manual pump up through 1/2 HP to automatic operation on level 6".

FIG. NO.	PRICE
25363	

Vertical Float Switch

- Vertical Style for use in Sump Narrow or Shallow Sump Pits
- Simple Piggyback Plug Makes Easy Electrical Connection
- Includes Mounting Bracket





DUFF DIFFERS

We'll show you how!

SUMP PUMP TRIM



PVC SUMP PUMP SWING CHECK

Compression. One size fits 1 1/2x1 1/2, 1 1/2x1 1/4, or 1 1/4x1 1/4

FIG. NO.
15900

CORRUPGATED SUMP PUMP HOSE KIT

- Works with all trypes of pumps
- Used for both 1-1/4" and 1-1/2" discharge
- 24" polyethelene hopse, ABS thread X barb adapter, galvanized clamp



Fig. No.
1581





SUMP PUMP CHECK VALVE

- Super quiet
- Rubber body
- Stainless steel flapper
- Fits PVC, styeel or copper

SIZE	FIG. NO.
1 1/4 HxMale	15838
1 1/4HxH	15845
1 1/2HxH	15846
2HxH	15847
3HxH	15849



DUFF gladly accepts VISA & Mastercard

SUMP PIT

Pit and Lid for submersible or upright sump pump

Call or email us for other available sizes

FIG. NO.	TYPE
151910	18" x 20"
231226	18" x 24" Corrugated

SUMP PUMPS



SUBMERSIBLE HIGH TEMPERATURE PUMP

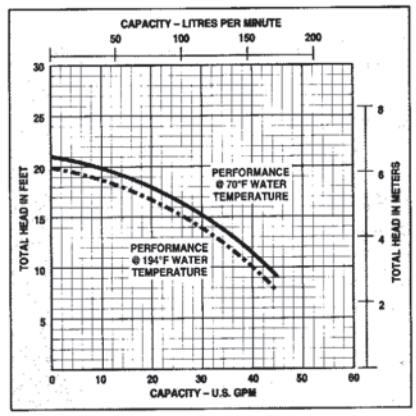
Cast Iron. Solids handling capability to 3/4", 1/3 HP, 115v. 1 1/2" NPT vertical discharge. Includes separate high temperature mercury float switch. **APPLICATIONS: boiler blow down pits, condensate pits, hot water sumps. Liquid temperature - 200°F (93°C)**

GREAT FOR HOT WATER

ORDERING INFORMATION

Catalog Number	HP	Max. Load Amps	Volts	Phase/ Cycle	Solids Handling Capability	Discharge
317777	1/3	12.0	115	1/60	3/4"	1-1/2" NPT

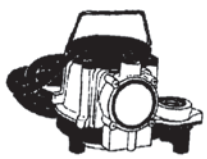
PERFORMANCE CURVE



CAST IRON SUBMERSIBLE PUMP

DUFF has the answers to your sump pump questions. Call today.





Cast iron, epoxy coated, passes 1/2" solids, 1 1/2 discharge, diaphragm switch, 8' power cord, 1/3 HP motor.

Gallons Per Hour 1'	10'	20'	shut off PSI	Fig. No.
2750	1750	750	18.0	7.8 11539
SAME AS 11539 WITH 25' CORDLESS SWITCH				
2750	1750	750	18.0	7.8 48537

Model 6-CIA.



FLOAT TYPE SUMP PUMP

Mechanical snap action switch, cast iron epoxy coated, 10' power cord, 1/3 HP, 1 1/2" discharge. Model 6EN-CIA-SFS.

FIG. NO.	TYPE
9283	w/10' cord
72911	w/25' cord

WATER-POWERED BACK-UP PUMPS: WORK WITHOUT ELECTRICITY!



FIG NO.	TYPE	FEATURES
190141	Liberty SJ10 SumpJet	1-1/2"Discharge, 3/4"NPT water inlet, removes 2 gallons for every 1 gallon used
231687	Liberty SJ10 SumpJet (with 9v visual and audio alarm)	
167093	Guardian 747 H2O	1-1/4"Discharge, 3/4"NPT water inlet

Guardian 747 H2O



Liberty SJ10

Myers®
STA-RITE®
LittleGIANT
Franklin Electric
Liberty Pumps®
Pentair

BACK-UP SUMP PUMP SYSTEM

The greatest protection for basements. Uses any standard 12 volt battery. Battery is kept charged and automatically recharges when pump is used. If power goes out or the main sump pump fails, the battery pump will keep the basement dry and free of potential damage. Pump is made of corrosion resistant thermoplastics. High head pump to accommodate long piping runs. Sold LESS BATTERY.



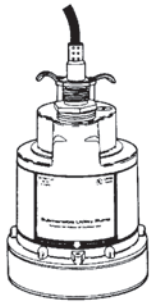
Discharge Height above pumping level	Performance - up to 5100 gallons per hour						
	0'	5'	10'	15'	20'	25'	30'
Gallons per minute	23	20	18	14	10	6	1

FIG. NO.	PRICE
151278	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

UTILITY / SUMP PUMPS

GEYSER II "CLASSIC"



- 1/4 HP, 115 volt motor.
- Open type trash impeller resists clogging
- 1-1/4" FIP discharge with garden hose adapter included
- Pumps floor dry to 1/8"
- Fits into 7" opening
- Two-Year Warranty

FIG. NO.	PRICE
10629	

Discharge Height above pumping level	Performance - up to 5100 gallons per hour				
	0'	5'	10'	15'	20'
Gallons per minute	21	19	17	14	8

SUPER GEYSER

1/3 HP, 115 volt motor

Pumps floor dry to 5/8"; fits into 7" opening

1 1/4" MPT discharge with garden hose adapter included.



FIG. NO.	PRICE
37878	

Discharge Height above pumping level	Performance - up to 1860 gallons per hour					
	0'	5'	10'	15'	20'	25'
Gallons per minute	36	29	27	21	12	1

PEDESTAL SUMP PUMP

PLASTIC



FIG. NO.
263133

LITTLE GIANT 5-ASP-LL UTILITY PUMP

- 1/6 HP shaded pole motor with overload protection
- Designed for continuous duty
- 1 in. FNPT discharge
- Pumps down to 1/8 in. (38 mm)
- Garden hose adapter
- Removable inlet screen for easy cleaning
- Epoxy coated cast aluminum housing
- Viton shaft seal



FIG. NO.
57068

DUFF TIP:

- To minimize the chance of clogs, the pump should have a no-screen intake design coupled with an impellor that can handle solids up to ½-inch in diameter.
- The switch should be mechanical, not a pressure switch.
- Tthe float should be solid so it can't become waterlogged, fail to switch off, and burn out the pump.

LITTLE GIANT 6 SERIES

Applications

- Basement sumps
- Dewatering
- Water transfer

- Cast Iron, epoxy coated
- Passes 1/2" solids, 1-1/2" FIP discharge
- Diapragm switch, 8' cord
- 1/3 HP motor

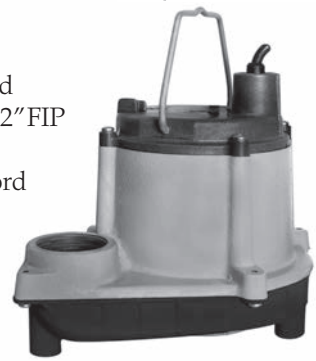
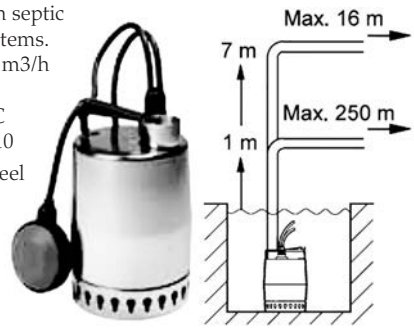


FIG. NO.	MODEL	ON/OFF LEVEL
11539	6-CIA	Turns on with 7"— 10" water Turns off with 1"— 4" water
121519	6-CIA-ML	Turns on with 4"— 7" water Turns off with 1-1/2"— 3-1/2" water

UNILIFT KP SUBMERSIBLE PUMP

Unilift KP is a submersible pump designed for pumping clean, non-aggressive water and slightly dirty (grey) wastewater such as domestic effluents from septic and sludge treating systems.

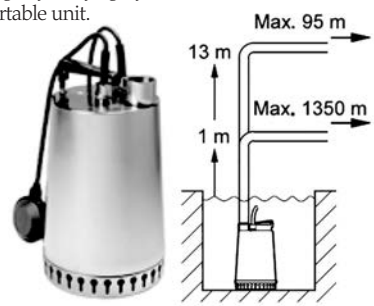
- Max. flow rate, Q: 14 m3/h
- Max. head, H: 9 m
- Liquid temp.: 0-50 °C
- Max. particle size: Ø10
- Material: Stainless Steel



UNILIFT AP12 SUBMERSIBLE PUMP

Unilift AP12 is a submersible pump designed for pumping clean, non-aggressive water and slightly dirty (grey) wastewater. The pump can be used as a portable unit.

- Max. flow rate, Q: 32 m3/h
- Max. head, H: 17 m
- Liquid temp.: 0-55 °C
- Max. particle size: Ø12
- Material: Stainless Steel



HP	Descr	Model	Fig. No.	Price
1/5	Auto	KP150A	67065	
1/3	Auto	KP250A	167703	
1/2	Auto	AP12A	67160	

UTILITY / SUMP PUMPS



ORIGINAL PONY PUMP

- 115 volt AC
- Instant self-priming
- Moves up to 360 GPM with hydro impeller
- Excellent for even tanks and water heaters
- 3/4" GH in & out

Fig No.	Volt
10700	115 AC



UTILITY PUMP

- Compact, Portable Design
- High-Powered 1/2 HP 7500 RPM, 115 volt insulated American-made motor
- 3/4" inlet and outlet

Fig No.
40701



LITTLE GIANT 300 GPH POOL COVER PUMP WITH TUBING

- 8 foot power cord
- Garden hose adaptor for 1/4" MNPT outlet
- 25 feet of 1/2 inch I.D. tubing, and fastener clamp.

WATER WIZZARD

Little GIANT

Franklin Electric

- Bottom pick up
- Female discharge
- Epoxy-coated aluminum
- Removes water to 1/8"
- 1" IP with garden hose adapter
- Pumps to 26" high

Fig No.	TYPE
46933	Manual (No Switch)

Fig No.	TYPE
57068	With Pressure Switch

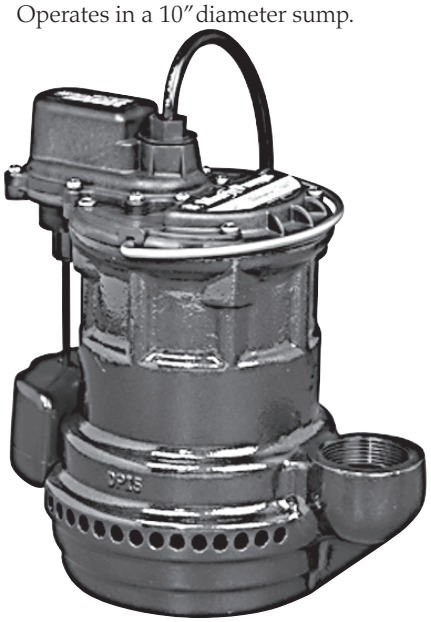


Liberty Pumps

Model 247 VMF

- 1/4 hp Cast Iron Submersible Sump Pump
- VMF switch
- Magnetically operated vertical float

Operates in a 10" diameter sump.



Model	Fig No.	Type
L-247	235358	Cast Iron 1/4 HP, 1-1/2" Discharge (Automatic)



Liberty Pumps

Model S-37

Builders Series Submersible Sump Pump
1/4" Solids Handling - 1-1/2" Discharge

- Quiet running, heavy-duty 1/3 hp motor
- High suction ports to reduce potential jamming
- High capacity flow rates
- 10' standard power cord

Model	Fig No.	Type
S-37	207812	Builders Series 1/3 HP, 1-1/2" Discharge (Automatic)

Liberty Pumps

Model L-453

Submersible Sump Pump
1/2 hp - 1-1/2" Discharge - 3/8" Solids Handling

- Vortex style impeller passes solids without clogging
- Oil-filled, hermetically sealed motors with thermal overload protection
- Quick-disconnect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor.

Model	Fig No.	Type
L-453	226788	Cast Iron 1/2 HP, 1-1/2" Discharge (Automatic)



LAUNDRY TRAY PUMPS



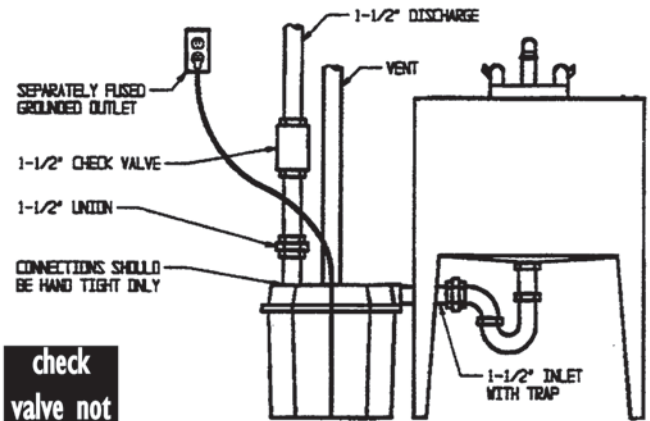
LAUNDRY TRAY PUMP
LTS High capacity reservoir pump

The LTS is a heavy duty pump designed for moving large quantities of water. Used in commercial and industrial air-conditioning systems, large refrigeration units, and multiple unit installations to tie several drains into one disposal pump.

HARTELL

DIMENSIONS	10″x 12″x 17″
INLET	1/2″FIP
DISCHARGE	1″FIP
PERFORMANCE	7.5 GPM @ 12′

Model	Max PSI	HP	Wgt.	Fig. No.
LTP-1	8	1/4	30	47184
L111A	switch assembly only			9122



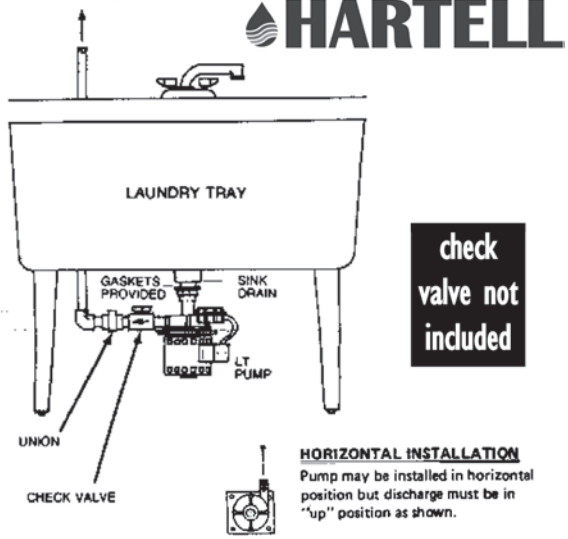
check valve not included

AUTOMATIC LAUNDRY TRAY/SINK/SHOWER PUMP

Corrosion-proof receiver is attractive and lightweight, with over 5-gallons capacity. Safety features include double-insulated construction, automatic thermal overload protection and complete factory pre-wiring. Sealed, submersible pump and switch design eliminates the possi bility of moisture damage Unit can be even installed below floor level. Diameter 14.75", height 14.1", shipping wt. 27 lbs.

- 2″ FIP inlet
- 2″ FIP outlet
- Vent: 2″ FIP
- 10GPM at 25′
- Polypropelene tank

FIG. NO.	COMPLETE UNIT
136471	1/2HP, 2″ Discharge



HARTELL

check valve not included

HORIZONTAL INSTALLATION
Pump may be installed in horizontal position but discharge must be in "up" position as shown.

MODEL LTA-1
AUTOMATIC LAUNDRY TRAY PUMP

Completely self-contained unit that is easy to connect directly to laundry tray tubs. Light weight and compact, this model eliminates reservoirs, traps, extra fittings and costly labor. (Automatic model LTA-1 includes a pressure-activated switch that turns pump on when water enters tub.)
ABS plastiic design features high impact & corrosion resistance, thus assuring long life. 1/8 hp motor, 1550 rpm.
Inlet: 1-1/2" NPSM: Outlet: 1" NPT. Integral junction box.

FIG. NO.	PRICE
42878	



EFFLUENT/SEWAGE PUMPS

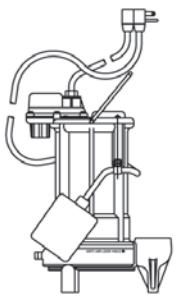


CUSTOM DESIGNED PUMP SYSTEMS

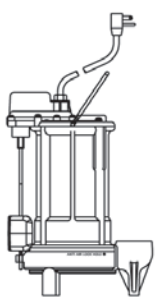
DUFF offers Liberty Engineered Pump Systems (EPS) in various configurations. From simplex to duplex grinder and solids handling systems, we can provide the specific pump system to meet your job requirements.

Simply provide us your specifications and our technical sales department will draft a detailed quotation with drawings for your submittal package.

Liberty's EPS systems have factory assembled components such as floats, brackets, guide-rails and even pre-mounted pumps (when system size allows). This factory assembly reduces job site labor and potential errors.



Model 283
Wide angle float switch with series (piggy-back) plug



Model 287 VMF-Series
Vertical magnetic float for smaller pits – will operate in a 10" diameter sump

280-SERIES
1/2 hp Submersible Effluent/Sump Pumps

The Liberty 280-Series provides a cost effective "midrange" pump for on-site waste water systems, liquid waste transfer and commercial heavy-duty sump pump applications that require higher head or more flow. Designed around Liberty's unique "Uni-Body" casting, the 280-Series will provide years of reliable performance.
All Models Feature:

- Vortex style impeller permitting passage of solids up to 3⁄4"
- 416 stainless steel rotor shaft
- Permanently lubricated upper and lower ball bearing
- Epoxy powder coat finish
- All fasteners – corrosion-resistant stainless steel
- 11⁄2" Discharge
- Stainless steel bottom screen – easily removable
- Maximum fluid temperature: 140˚ F.

Model	FIG NO.	Type
L-283	229026	Cast Iron Effluent 1/2 HP, 1-1/2" Discharge (Automatic)
L-287	170914	Cast Iron Effluent 1/2 HP, 1-1/2" Discharge (Automatic)

DUFF TIP: An effluent pump is typically used in septic tank applications. Effluent is the gray wastewater that remains after the solids settle out.

Liberty Pumps®

PUMP CONTROLS



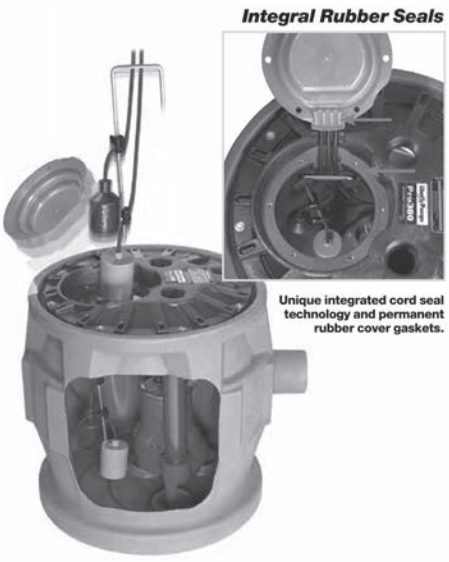
Provides reliable alternating operation of two pumps with automatic override control in residential or commercial installations. Common applications include sump basins, effluent or sewage pump chambers and lift stations

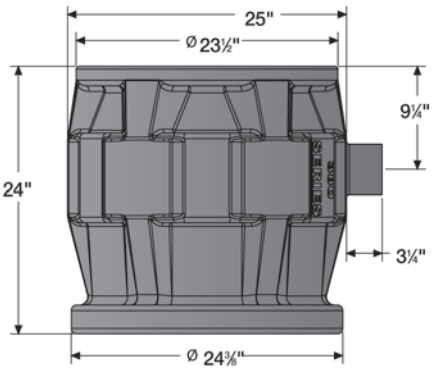
- Magnetic Motor Contactors
- HOA switches (internal)
- Green pump run indicators (internal)
- Control ON/OFF switch (internal)
- Control/Alarm power-on indicator (internal)
- Circuit breakers
- Easy wiring terminal blocks
- Visual and audible alarm
- Auxiliary Contacts

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

PACKAGED RESIDENTIAL SEWAGE SYSTEMS

PRO380 QUICKTREE® TECHNOLOGY



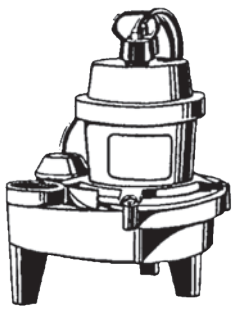


QuickTree® technology allows easy access and removal of switches without disturbing pump or plumbing.

- Integrated rubber seals permanently attached to cover.
- Unique cord seal technology integrated into the inspection cover.
- Shallow basin design (24") for easier installation in difficult soil/bedrock locations.
- Large 41 gallon capacity for longer pump cycles.
- Integrally molded torque stops secure the pump in its proper position.
- Integrally molded anti-flotation collar.
- Durable polyethylene construction.
- Completely assembled.

Fig No.	Description					
124289	P382LE51	1/2HP	115V	1Ph	2" Discharge	64LBS

SEWAGE PUMP



- 2" discharge
- 2" solids handling
- Heavy cast iron construction with 2-vane semi-open HYTREL impeller
- Oil filled, thermally protected motor
- Permanently lubricated bearings
- All stainless steel fasteners
- Stainless steel rotor shaft
- Mercury-free float with series plug on automatic models

FIG NO.	HP	TYPE
9129	1/2	115V, AUTOMATIC
236478	1/2	230V, MANUAL
230934	4/10	115V, MANUAL
223825	4/10	115V, AUTOMATIC

ASCENT II MACERATING TOILET SYSTEM

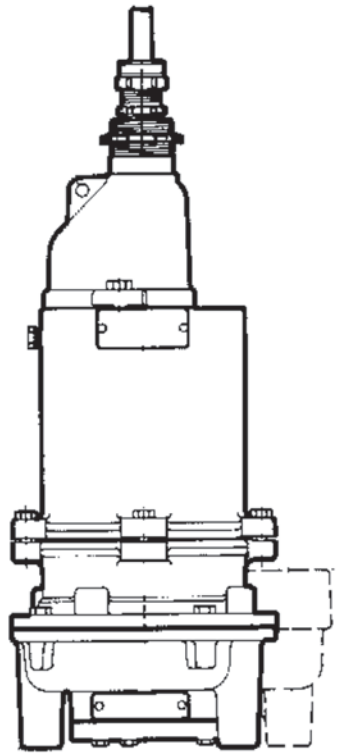


The new Ascent II macerating toilet system features a 1.28 GPF high efficiency toilet for a macerating system. Now, put a bathroom anywhere! Perfect for bathroom additions and remodeling without breaking concrete floors, the Ascent II can **pump up to 25' vertically and 150' horizontally through a 1" discharge pipe.** The new system features advanced RazorCut™ technology for improved maceration of waste and a removable service panel that provides quick access to the cutter area without disconnecting the plumbing. Other features include IST™ solid state switching, a built-in alarm and LED lights with external touchpad for alarm silence and manual override. The high quality toilets – available in round front and elongated, have improved flush performance and carry the WaterSense® mark. Both models feature insulated tanks to eliminate sweating. Toilet seat included.

Fig No.
251259



GRINDER SEWAGE PUMPS



ADVANTAGES BY DESIGN

IDEAL FOR USE IN PRESSURE SEWER SYSTEMS.

- Recessed impeller provides steep non-overloading operating curve.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE.

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- Recessed impeller reduces radial bearing loads, increases bearing life.
- High torque capacitor starts single phase or three phase motors for assured starting under heavy load.
- Optional seal leak probe warns of seal leak condition, helps prevent costly motor damage.
- Single phase motors have on-winding current and temperature sensitive overload.

est. 1947
DUFF CO.
When you need it now... or don't know how
INFO@DUFFCO.COM

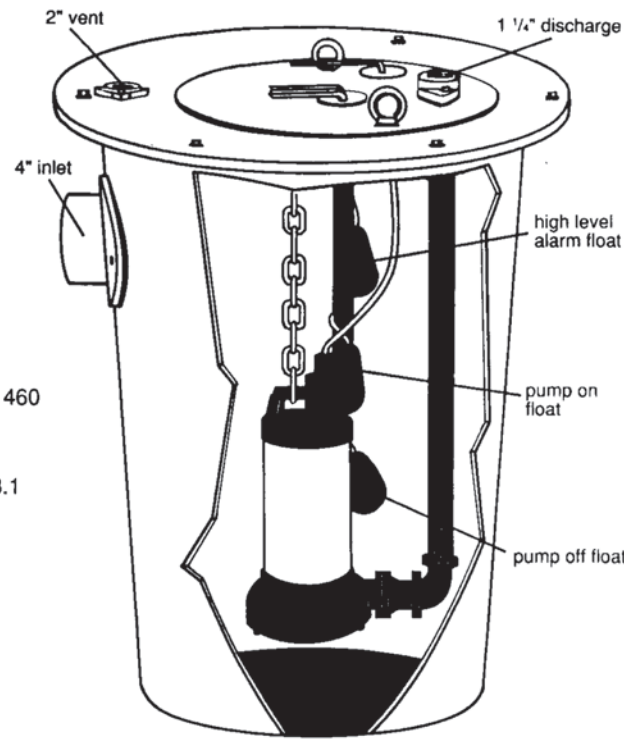


DUFF gladly accepts VISA & Mastercard

TYPICAL COMPLETE GRINDER SEWAGE PUMP SYSTEM

Electrical		
Voltage	230	230 or 460
Hertz	60	60
Phase	1	3
Amps	12.5	6.1/3.1

WIRING PER SPECIFICATION



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

SEWAGE PUMPS

GRUNDFOS S SEWAGE PUMPS

S pumps form the backbone of many sewage systems. They are selected for their strength, their durability, and for innovative features such as the SmartTrim impeller clearance adjustment system and the Smart Seal for leakage prevention. The Smart-Trim system used on the S-pumps makes it easy to adjust the factory-set impeller clearance and thus to maintain maximum pump efficiency. The Grundfos SmartSeal Auto-coupling gasket provides a completely leak-proof connection between the pump and the base unit of the auto-coupling system. The shaft seal is capable of rotating in either direction. When the pumps are installed with separate pipework, sludge sedimentation can be avoided by back-flushing the system at regular intervals.



GRUNDFOS

Applications include:
- Transfer of unscreened raw sewage
- Transfer of raw water
- Pumping of water containing sludge
- Pumping of industrial effluent.



GRUNDFOS SEG GRINDER PUMPS

Grundfos grinder pumps (SEG) are specifically designed for areas with no sewer systems or areas where gravitation systems are unsuitable. The high discharge pressure enables transfer of effluents and sewage over longer distances to the public sewer or sewage treatment plant. Available in single- or three-phase voltage, designed for voltage tolerances of –10%/+6%.

Suitable for pumping domestic sewage and other liquids with a pH value of 4 to 10 in permanent installations, these pumps are designed for fully submerged continuous operation or partly submerged intermittent operation with a maximum of 20 starts per hour. In order to protect the grinder system, the pumped liquid must be free from mechanically wearing particles or abrasives such as sand or gravel. Maximum temperature of pumped liquid: 40°C (104°F); for short periods, maximum one hour, up to 60°C ((140°F) is permissible (non-Ex versions only). Maximum submersion: 20 m (65 feet).

GRUNDFOS SL PUMPS

The SL range has been developed to optimize performance in a system, minimizing known risk factors and reducing maintenance requirements. Remarkably durable, the SL range offers long lasting, service-friendly submersible wastewater pumping. The highest standards of motor efficiency ensure substantial energy and cost savings. Motors are based on high-efficiency components, improving motor efficiency and prolonging pump life. The pumps are available with SuperVortex impellers (SLV) for applications with required low operating hours, dry matter content up to 5 %, and a spherical free passage up to 100 mm (3.9 inches), or with the S-tube impeller (SL1) for applications with required high operating hours, dry matter content up to 3 %, and a spherical free passage up to 100 mm (3.9 inches). The S-tube impeller is the only impeller on the market designed to cope with the challenges of modern wastewater with varying dry matter content.

Applications include transfer of drainage and surface water, domestic, municipal and industrial wastewater, and process water



SEWAGE EJECTOR PUMPS — 2" DISCHARGE



Total Head (feet)		4	8	12	16	20	24	28
GPM	4/10HP	120	108	90	68	42	20	0

Fig No	Description
223825	Automatic SP40A
230934	Manual SP40M

LIBERTY EFFLUENT PUMPS

FL50-Series 1/2 hp • FL60-Series 6/10 hp • FL70-Series 3/4 hp
Submersible Effluent Pumps 3/4" Solids Handling with 1-1/2" or 2" Discharge

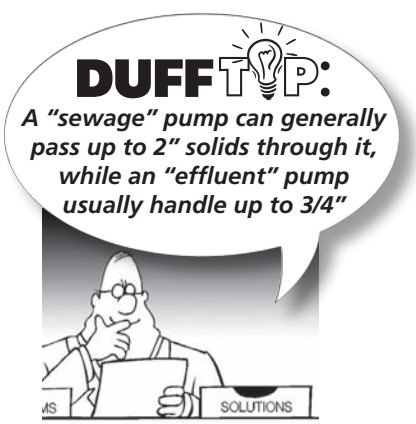
MODELS	HP	VOLTS	PHASE	AMPS	CORD LENGTH (ft)	AUTO-MATIC/ MANUAL	WEIGHT (lbs.)
FL51A	1/2	115	1	12.0	10'	Automatic	53
FL51A-2	1/2	115	1	12.0	25'	Automatic	55
FL51A-3	1/2	15	1	12.0	35'	Automatic	58
FL51M	1/2	115	1	12.0	10'	Manual	52
FL51M-2	1/2	115	1	12.0	25'	Manual	53
FL51M-3	1/2	115	1	12.0	35'	Manual	55
FL52A	1/2	208-230	1	6.5	10'	Automatic	53
FL52A-2	1/2	208-230	1	6.5	25'	Automatic	55
FL52A-3	1/2	208-230	1	6.5	35'	Automatic	58
FL52M	1/2	208-230	1	6.5	10'	Manual	52
FL52M-2	1/2	208-230	1	6.5	25'	Manual	53
FL52M-3	1/2	208-230	1	6.5	35'	Manual	55
FL62A	6/10	208-230	1	8.2	10'	Automatic	53
FL62A-2	6/10	208-230	1	8.2	25'	Automatic	55
FL62A-3	6/10	208-230	1	8.2	35'	Automatic	58
FL62M	6/10	208-230	1	8.2	10'	Manual	52
FL62M-2	6/10	208-230	1	8.2	25'	Manual	53
FL62M-3	6/10	208-230	1	8.2	35'	Manual	58
FL63M-2	6/10	208-230	3	5.6	25'	Manual	55
FL63M-3	6/10	208-230	3	5.6	35'	Manual	57
FL64M-2	6/10	440-480	3	2.8	25'	Manual	55
FL64M-3	6/10	440-480	3	2.8	35'	Manual	57
FL72A	3/4	208-230	1	10.5	10'	Automatic	53
FL72A-2	3/4	208-230	1	10.5	25'	Automatic	55
FL72A-3	3/4	208-230	1	10.5	35'	Automatic	58
FL72M	3/4	208-230	1	10.5	10'	Manual	52
FL72M-2	3/4	208-230	1	10.5	25'	Manual	53
FL72M-3	3/4	208-230	1	10.5	35'	Manual	58
FL73M-2	3/4	208-230	3	7.5	25'	Manual	55
FL73M-3	3/4	208-230	3	7.5	35'	Manual	57
FL74M-2	3/4	440-480	3	3.5	25'	Manual	55
FL74M-3	3/4	440-480	3	3.5	35'	Manual	57

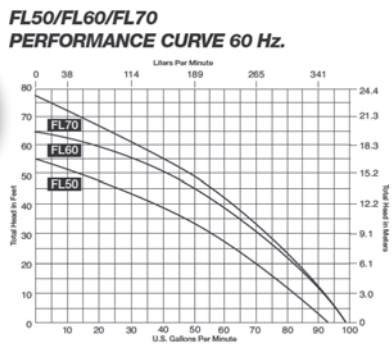


Liberty Pumps®

Features:
- Semi-open impellers permit passage of solids without clogging
- Heavy cast iron construction
- Stainless steel fasteners
- 416 stainless steel rotor shaft
- Permanently lubricated upper and lower ball bearings
- Oil-filled hermetically sealed motors with thermal overload protection
- Unitized carbon and ceramic shaft seal
- Dual-sized discharge flange: 1-1/2: or 2"
- Quick-disconnect power cord in 10' standard length (25' and 35' optional lengths available on some models)

TECHNICAL SPECIFICATIONS
FL50-, FL60- & FL70-SERIES
EXTERNAL CONSTRUCTION:
Pump Volute and legs – Gray iron casting class 25
Motor Cover – Gray iron casting class 25. All castings shall be powder coated for corrosion resistance prior to assembly.
Fasteners – all fasteners shall be 300-series stainless steel.
MOTOR
Submersible 3450 RPM, oil filled and hermetically sealed. Class B insulation rating. 17-4 PH stainless steel rotor shaft. Thermally protected on single phase models. Three phase models shall have overloads incorporated into the control panel, properly sized for the horsepower and amperage of pump.
IMPELLER
Cast iron – class 25, semi-open design capable of passing a minimum 3/4" solids.
SHAFT SEAL
Carbon/ceramic unitized design with BUNA N elastomers and stainless steel housing.
POWER CORD
10' cord length – Standard. Quick-disconnect design allows for easy field replacement. Optional lengths available per chart.
LEVEL CONTROL
Automatic models shall be controlled by an adjustable wide-angle style switch sealed in a polymeric float. A series piggy-back style plug shall be provided to allow for manual bypass operation.
DISCHARGE
2" FNPT with a 1-1/2" FNPT threaded cast iron flange provided.



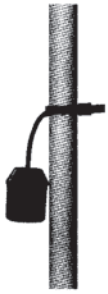


For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

CONTROLS

PUMP SWITCHES - Pump switches designed to directly control pumps up to 1 HP at 120V and 2HP at 230V. Each of these switches has an adjustable pumping range and is available in various cord lengths, all with piggy back plug unless noted. Each pump switch is UL Listed and CSA Certified.

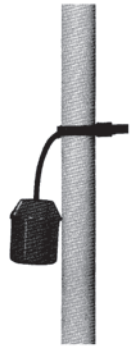
JUNIOR SUPER SINGLE



Mercury-activated
Controls pumps up to 1/2HP at 120V and 1HP at 230V
Not sensitive to rotation
Recommended for use in non-turbulent applications
Not designed to be directly wired to relays or motor contractors.
Pumping range: 5.5 to 17 inches
Available for pump up or pump down application.

MODEL	FIG. NO.	PRICE
JSU	43320	

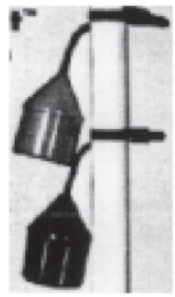
SUPER SINGLE



Mercury-activated
Controls pumps up to 1/2HP at 120V and 2HP at 230V
Not sensitive to rotation or turbulence
Suitable for use with intrinsically safe circuits
Pumping range: 5.5 to 15 inches
Available for pump up or pump down application.

MODEL	FIG. NO.	PRICE
SSD less plug 120/230v	10875	
SSD 120v	10874	
SSD 230v	10878	
SSU 120v	45343	

DOUBLE FLOAT



Mercury-activated
Controls pumps up to 1 HP at 120V and 2HP at 230V
Not sensitive turbulence
Pumping range: 1 to 48 inches (wider ranges available)
Available for pump up or pump down application.

MODEL	FIG. NO.	PRICE
DFD 120V	10884	
DFU 120V	41239	
DFU 230V	41240	
DFD 230V less plug	50365	

GRUNDFOS SLC / DLC CONTROL PANELS



The SLC and DLC pump controllers are designed for level control, monitoring, and protection of any submersible pump, 1.5 to 15 HP. SLC is a one pump controller and DLC is a two pump controller.

Applications:

The pumps will operate via signals from level switches. The Grundfos level switches are of the non-mercury type and are available for standard and explosion proof pumps.

TANK ALERT 1

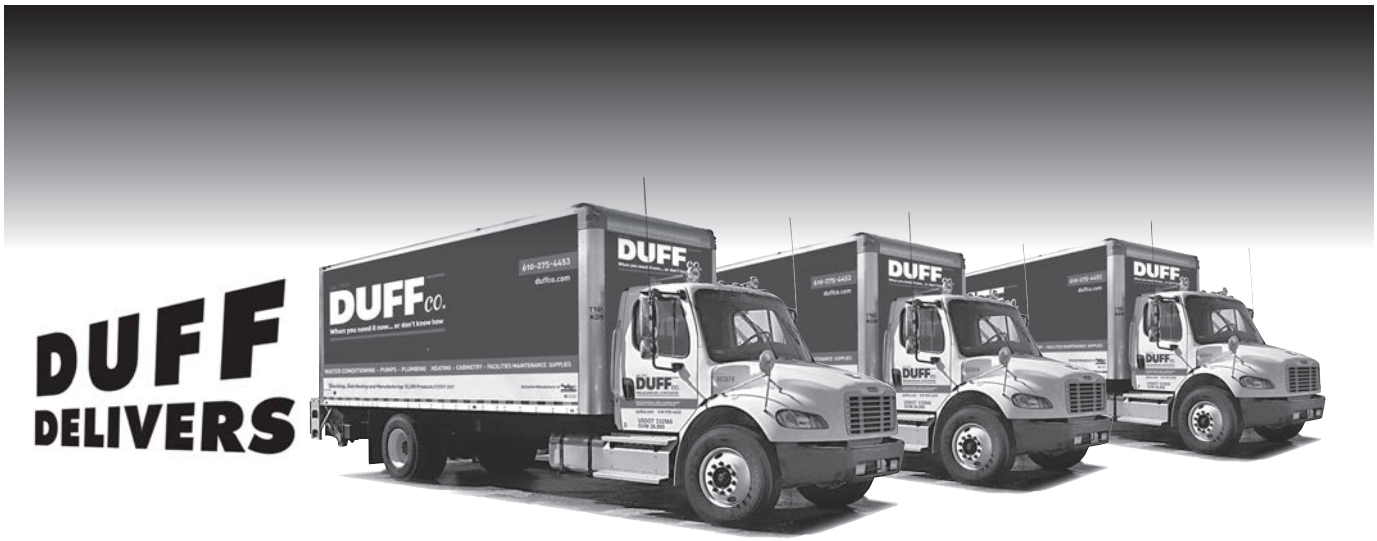
PUMP ALARM SYSTEM - Designed to visually and audibly warn of threatening high or low liquid level conditions in lift pump chambers, sump pump basins, holding tanks, sewage plus irrigation and other water systems. The standard alarm system includes a Tank Alert I and a sensor float control switch.



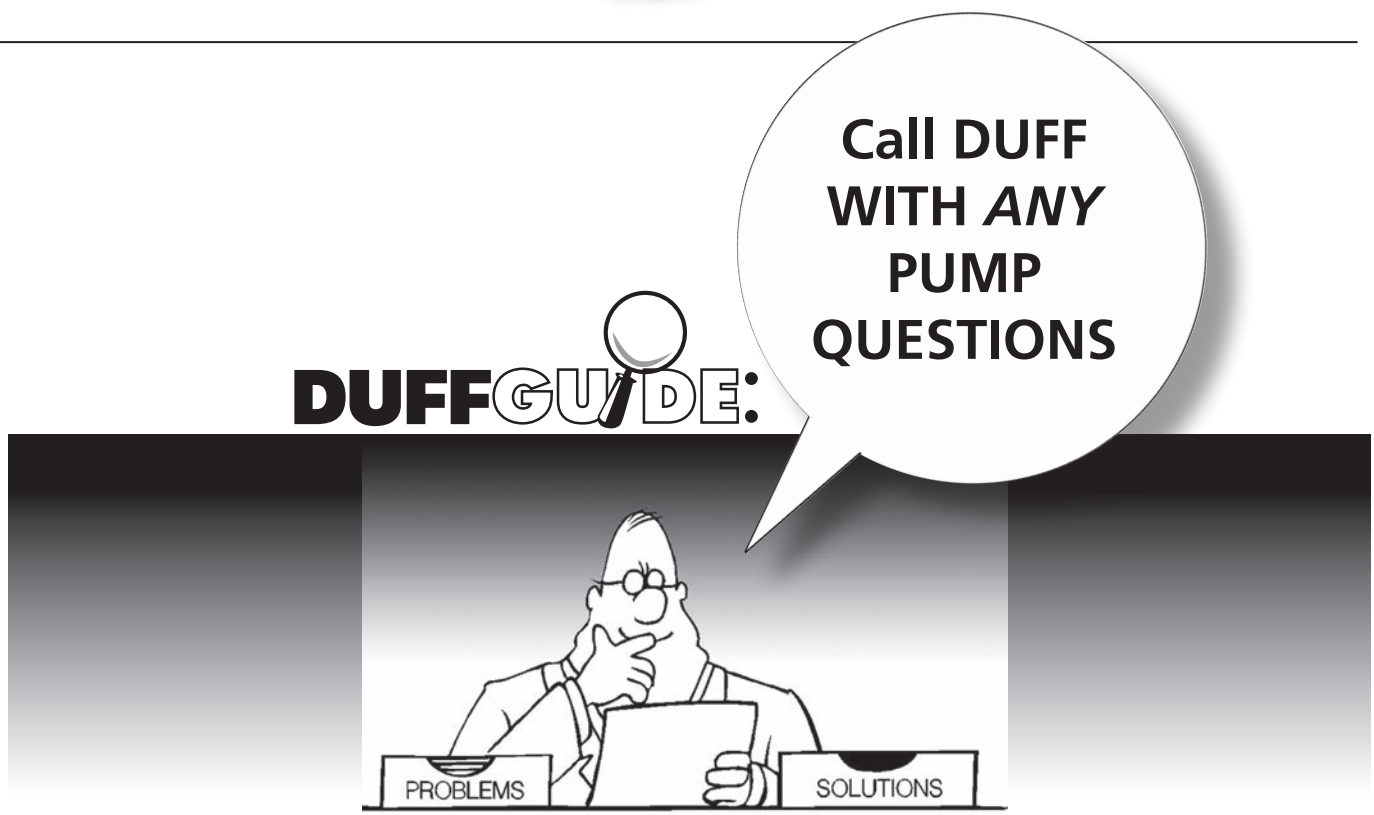
Designed for indoor use
Features horn and warning light
Switching mechanism operates on low voltage and is designed to reduce the possibility of shock
Includes optional auxiliary dry contacts for remote alarm hookup
UL Listed and CSA Certified

FIG. NO.	PRICE
151084	



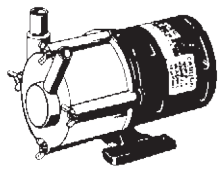


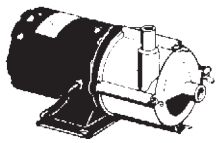


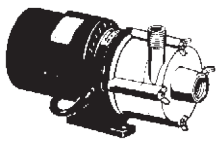


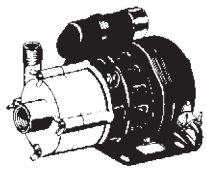
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

LITTLE GIANT CHEMICAL TRANSFER PUMPS









Magnetic Driven Pumps

Employing a completely "seal-less" engineering concept, Little Giant Magnet Driven Centrifugal Pumps are specifically designed to handle acids, alkalies, solvents and other sophisticated fluid chemistry with efficiency and trouble-free reliability.

FEATURES

Except where notes, all units feature:

* Titanium shaft and thrust washers for excellent wear and corrosion resistance.
* High quality, permanent, uncoated ceramic (barium ferrite) driven magnet.
* Glass-filled polypropylene pumping head and impeller.
* Nitrile O-ring.

FLUID SYSTEM DESIGN PARAMETERS

* Specific gravity: Up to 1.1
* Viscosity: Up to 100 SSU (20CPS)
* Ambient Air Temperatures: up to 77 Deg Far (24 Deg C)

NOTE; CONSULT FACTORY FOR APPLICATIONS WITH HIGHER AMBIENT TEMPERATURE, SPECIFIC GRAVITIES AND VISCOSITIES.

FLUID/MATERIALS IN CONTACT

Poly propylene, Titanium, Barium Ferrite and Nitrile.

MD-SC Series for semi-corrosive chemicals and solutions (polypropyelene, ceramic and Sung-N parts)

MD-HC Series for highly corrosive chemicals and solutions (polypropyelene/Ryton, Viton, carbon and ceramic parts).

Model 1-AA-MD

1/2" OD smooth discharge and intake ports. 316 stainless steel, corrosion-resistant shaft and Rulon-J thrust washers. Open shaded-pole motor has sleeve bearings. Impedance protected. 3' lead wires with no plug.

Model 1-MD

1/2" OD smooth discharge and intake ports. Open fan-cooled motor has sleeve bearings. Thermally protected. 6' power cord with 3 prong molded plug.

Model 2-MD

1/2" threaded MNPT discharge, and 1/2" threaded FNPT intake ports. Pen fan-cooled motor has sleeve bearings. Thermally protected. 6' power cord with 3 prong molded plug.

Model 3-MDX

5/6" OD smooth discharge and intake ports. Open fan-cooled motor has sleeve bearings. Thermally protected. 6' power cord with 3 prong molded plug.

Model 4-MD

Same features as Model 3-MD with larger motor.

Model 5-MD

1/2" threaded FNPT intake ports. Open fan-cooled PSC motor has sleeve bearings. Thermally protected. 6' power cord with 3 prong molded plug.

MD Series Specifications

Model	Fig	Intake Size	Disc. Size	Motor					Motor Type	Max PSI	Shut Off Head (Ft.)	Gallons Per Hour							Dimensions (in)			Wt. Packed Lbs.
				Hertz	RPM	HP	Watts	Amps				1'	3'	6'	9'	15'	18'	24'	HT.	WD.	LG.	
1-AA-MD*	11544	1/2" OD	1/2" OD	60	3250	1/200	16	.27	OPEN	2.35	5.4	160	100	-	-	-	-	-	3.7	2.4	4.4	1.5
1-MD*	—	1/2" OD	1/2" OD	60	2450	1/70	60	.79	OPEN FC	4.6	10.6	180	165	90	20	-	-	-	5.0	4.0	8.3	4.0
2-MD	11548	1/2" FNPT	1/2" MNPT	60	3100	1/30	100	1.5	OPEN FC	6.3	14.6	510	485	410	330	-	-	-	4.3	4.0	8.5	4.0
				50	2600	1/30	105	1.7		4.5	10.5	470	420	350	200	-	-	-				
3-MDX	—	5/8" OD	5/8" OD	60	3150	1/30	100	1.7	OPEN FC	6.8	15.2	445	415	360	295	-	-	-	4.3	4.0	8.3	4.0
				50	2850	1/30	95	1.5		4.8	11.1	415	385	290	180	-	-	-				
3-M	—	1/2" FNPT	1/2" MNPT	60	3300	1/20	105	1.4	OPEN FC	7.1	16.3	590	545	490	390	150	-	-	4.3	4.0	8.5	7.0
4-MD*	—	1/2" FNPT	1/2" MNP	60	3250	1/12	213	2.4	OPEN FC	10.2	23.7	690	660	600	545	390	280	-	4.3	4.0	8.9	7.5
5-MD	11556	1/2" FNPT	1/2" MNP	60	3250	1/8	200	2.1	OPEN FC PSC	15.0	34.6	905	875	800	750	635	575	440	5.6	5.4	8.3	8.6
				50	2800	1/8	155	1.9		9.7	22.4	945	905	800	715	530	440	-				

LITTLE GIANT CONDENSATE PUMPS

An inexpensive, trouble-free solution to condensate removal where gravity drainage is impossible or impractical, Little Giant Automatic Condensate units are designed to fit most mechanical refrigeration and air conditioning units. Also for use in the disposal of waste water of Drinking Fountains, Humidifiers, Ice Makers, Beverage Machines and other applications.

Model 1-ABS
Designed for in-pan mounting, submersible pump has cast aluminum housing with protective epoxy coating, smooth intake and 1/4"MNPT discharge. Float operated switch is waterproof and engages pump in 1.06" of water, and disengages pump in .5" of water. Pump has 6' power cord, with 3 prong molded plug.

Model TKT
Nylon, corrosion-proof tank for use with Model 1-ABS pump unit. Kit consists of tank, check valve, and 20' of 1/4"tubing.

Model 2EC-SPT
Shallow pan tank unit for use where minimum height is a requirement. Pump has 1/4"MNPT discharge. Float operated switch engages pump in 2.25" of water, and disengages in 1.5" of water. Pump has 6" power cord with 3 prong molded plug.

Model 34C-SPT
Larger of the shallow pan tank units has greater pumping capacity. Pump has 1/2"MNPT discharge, 6' power cord with 3 prong molded plug. Pump engages in 4.45"of water, and disengages in 3.45"of water. Unit includes 3/8"check valve.

Suitable for High Efficiency Applications
For Condensate and waste water removal tasks, Little Giant vertical-pump Automatic Condensate Units are an efficient, low cost answer. Designed to fit most larger mechanical refrigeration and air conditioning units, these pump units also serve as excellent waste water disposal systems where increased volume is needed.

FEATURES
Except where noted, all units feature:
Vertical type pump unit. Leakproof, rust-proof, high-impact polystyrene tank. ABS Motor & Tank cover, volute and impeller. Stainless steel shaft. Snap action Switch. 3/8" OD barbed discharge. 6' power cord with 3 prong molded plug. Thermal overload protection.

Model VCM-15UL
Pump engages in 2.40" of water, and disengages in 1.25" of water. Check valve. UL Listed.

Model VCM-15ULS
Same as above, but includes safety switch, and check valve. UL Listed.

Model VCM-20UL
Same as Model VCM-15UL above, with greater pumping capacity. Check Valve. UL Listed.

Model VCM-20ULS
Same as Model VCM-20UL, with safety switch, and check
valve. UL Listed.

Model VCC-20ULS
Low-profile, compact size for limited space installations. Pump engages in 1" of water, and disengages in .45 of water. Includes safety switch and check valve.

Model VCL-14ULS
Pump engages in 3.56" of water, and disengages in 2.6" of water. Includes safety switch.

Model VCL-24UL
Same as above with larger motor. No safety switch. Thermally protected. UL Listed.

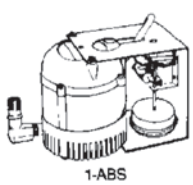
Model VCL-24ULS
Same as Model VCL-24UL above, with safety switch. UL Listed.

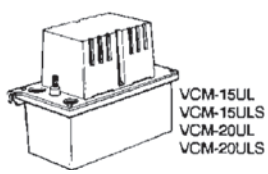
Model VCL-45S
Heavy duty pumping unit. Pump engages in 3.56" of water, and disengages in 2.6" of water. Will pump 75 GPH at 40' Head. 3' power cord, without plug. 3/8" OD copper tube discharge. Includes
safety switch.

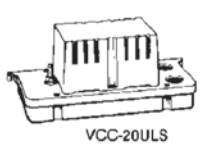
Coil Cleaning Kit
Model GKPK-SC
A fast inexpensive and effective system for "boiling out"coils, the Little Giant Coil Cleaning Kit is ideal for use with steam converters, burnouts, shell and tube head exchangers, water heaters and oil supply lines to fuel oil heaters. Used with coil cleaning acids. Kit includes 5 gallon polyethylene tank with cover and baffle, and Little Giant Model 2-MD-SC (Special Version #582523) magnet-driven pump with mounting bracket. Also includes 18"of 1/2"Tygon tubing, 10'.

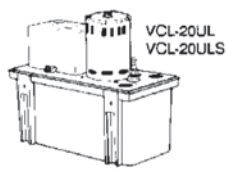
	Gallons per hour @ 115 VAC 60 HZ			SHUT OFF	PSI	FIG. NO.
	1'	5'	9'			
1-ABS	205	145	-	10'	4.3	11517
VCC-20ULS	70*	55*	-		8.6	43186
VCM-15UL(S)	50*	30*	-	15'	6.5	30238
VCM-20UL(S)	701*	55*	-	20'	8.6	38162
VCL-14UL(S)	170	125	-	14'	6.1	16965
VCL24-UL(S)	250	210	105	24'	10.4	30244
VCL-45VL (S)	440	415	330	45'	10.5	30245
GKPK-SC	310	285	225	14.6'	.5	18146
VCMX-20UL		75	60	21'	—	272274
VCMA-20UL(S)	80	70	48	20'	—	38162-115v 216652-230v

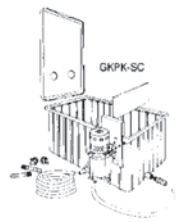
**GPH RATES SHOWN ARE WITH CHECK VALVES.*


1-ABS


VCM-15UL
VCM-15ULS
VCM-20UL
VCM-20ULS


VCC-20ULS


VCL-20UL
VCL-20ULS


GKPK-SC

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

LOOKING FOR REPAIR PARTS FOR YOUR PUMPS?

CALL DUFF!

WE CAN SUPPLY YOU WITH PARTS FOR ANY PUMP.

ARMSTRONG

ZOELLER PUMP COMPANY

STA-RITE Simply Smarter.

abs

Myers

Taco

LittleGIANT

Franklin Electric

Liberty Pumps

AURORA Pentair Water

BARNES

Bell & Gossett

GOULDS WATER TECHNOLOGY a xylem brand

PACO PUMPS

Thrush Co.Inc.

GRUNDFOS

DUFFNOTE: **We also offer pressure vessels (ASME-rated) in composite material and stainless steel from these manufacturers:**

QUICK TANKS, Inc.

Taco

John Wood Hot Water for Life™

Bell & Gossett

AMTROL

SINCE 1908 wessels company

GENERAL PURPOSE CENTRIFUGAL PUMPS



- **1/3 to 2 1/2 HP** - in either high head or medium head models, with heavy duty motors, easy service design, four position discharge and air volume control tapping.
- **Easy Serviceability** - All models include replaceable wear ring and feature back pull-out design.
- **Medium Head** - Models deliver up to 110' of head with capacities to 140 GPM.
- **High Head** - Models deliver up to 140' of head with capacities to 90 GPM.
- **J Series Feature Lexan Impeller**s - Abrasion-resistant for normal applications, with working temperatures to 140 Deg. F.
- **JB Series Feature Brass Impellers** - for temperature applications up to 225 deg F. JB Pumps als equipped with high temperature shaft seals.

J/JB SERIES pumps and other Sta-Rite centrifugal pumps can be ordered with 50 cycle motors and with other design characteristics.
Call Duff for complete information on Sta-Rite centrifugal pumps for specific applications, on other equipment ... or for any specific installation requirements.

WE'RE AVAILABLE!

Need help with a tools, products or parts for a job?

Call or email your DUFF rep today!

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GRUNDFOS CR, CRE SERIES PUMPS
Vertical Multistage Centrifugal

OVERVIEW

- The CRE pump is a CR pump, motor and integrated variable frequency drive. The CRE pump is a system which is able to solve application problems and save energy. The basic CR pump range, which can be applied in almost any industrial solution, is already in itself the broadest range available.
- The basic CR pump range is available in four different materials: cast iron, two grades of stainless steel, and all-titanium. There are eleven flow sizes, capable of producing up to almost 725 psi pressure, and with a variety of shaft seals, rubber materials and supply voltages.
- Pump parts which are typically vulnerable to difficult liquids or particularly demanding operating conditions can be optimized for their purpose and designed for specific requirements.



GRUNDFOS®

APPLICATIONS

CR pumps provide a complete range of pump solutions so that all applications, industrial and domestic, can benefit from the Grundfos touch. There are Grundfos CR pumps for these applications

- Industrial Processing systems
- IWashing and cleaning systems
- IPumping of acids and alkalis
- IFiltration systems
- IWater Pressure Boosting
- IWater Treatment
- IHVAC
- Irrigation

FEATURES & BENEFITS

- The CR pump, motor and VFD is an engineered product
- The CRE pump is supplied by one supplier
- Reduces installation and wiring costs
- The functionalities are designed for specific pump applications
- The CRE pump with sensor is a plug and pump product
- Grundfos quality and reliability
- A compact system
- The pump, motor and VFD are tested as a complete unit in the factory



DUFF
SELLS SOLUTIONS

Call us today!
610-275-4453

GRUNDFOS CR, CRE SERIES PUMPS
VERTICAL MULTISTAGE CENTRIFUGAL



- **MOTOR**
  Grundfos provides many motor solutions depending upon the application and demand. In addition, Grundfos makes its own motors to ensure maximum performance. The ML motors* are remarkably quiet and highly efficient. They are also available in the self-regulating MLE configuration, featuring an integrated variable frequency drive.
- **CARTRIDGE SEAL**
  The specially designed cartridge seal increases reliability, ensures safe handling and enables easy service and access.
- **SHAFT SEAL SOLUTIONS**
  The cartridge shaft seal configuration comes in a wide choice of materials. It is available in flushed seal and double seal configurations and can handle temperatures from -40°F to +356°F (-40°C to +180°C).
- **CONNECTION OPTIONS**
  The Grundfos CR can be connected to any piping system.
- **DRY-RUNNING SENSOR**
  The patented Grundfos LiqTec™ system eliminates the risk of breakdowns due to dry running. If there is no liquid in the pump, the LiqTec will immediately stop it.
- **HIGH-PERFORMANCE HYDRAULICS**
  Pump efficiency is maximized by state-of-the-art hydraulic design and carefully crafted production technology.
- **DURABLE BEARINGS**
  The CR bearings are remarkably long-lived thanks to hard-wearing materials and a wide range of options for difficult liquids.
- **MATERIAL OPTIONS**
  The CR is available in four different materials: AISI 304/cast iron, stainless steel AISI 304, stainless steel AISI 316, and titanium.
- **WIDE RANGE OF SIZES**
  The CR comes in 11 hydraulic sizes and hundreds of pressure sizes, ensuring that you can always find exactly the right pump for the job.

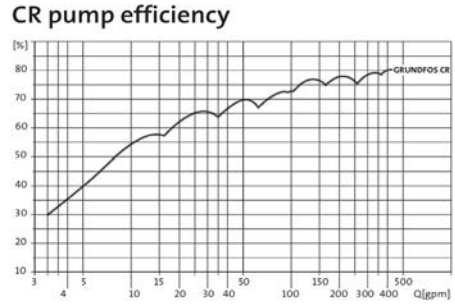
Efficiency -- Reducing the REAL Costs

Electricity is the most expensive part of any pump—a simple fact that is often overlooked when pumps and prices are compared. It may be surprising that the purchase price and maintenance costs account for less than 15% of the total lifetime cost of a pump. Electricity accounts for a staggering 85% or more of the total costs. So if you want to save money, that's where you should look. The Grundfos CR makes a real difference; the table below shows just how much electricity CR can save you annually. These savings will continue for years and years – for every pump you own. Its low lifetime cost makes a CR pump a very sensible investment.

How much difference does a CR make?

Application type	Typical duty point	Operating hours per day	Average kWh reduction per year with CR
Water supply	350 gpm @ 85 psi	24 hours	18,500 kWh
Boiler feed	175 gpm @ 225 psi	15 hours	12,700 kWh
Water treatmen	10 gpm @ 225 psi	15 hours	3,200 kWh
Industrial washing and cleaning	25 gpm @ 225 psi	5 hours	1,600 kWh
General industrial pump task	25 gpm @ 145 psi	10 hours	2,200 kWh

CR pump efficiency



Getting the best possible overall efficiency out of your pump makes financial sense. The narrow interval between CR pump sizes allows you to eliminate the efficiency drop associated with over-sized pumps. By minimizing the difference between pump capacity and the required pressure and volume, you get a pump which runs as close to its optimum duty point as possible. That makes it as cost-efficient as possible. The result of years of Grundfos development work is a 10% increase in pump efficiency. This translates into a power reduction of 15-20% for the CR pumps. When pumps are in operation many hours a day, such improvements provide substantial savings – year in and year out.

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS CR, CRE SERIES PUMPS
Vertical Multistage Centrifugal

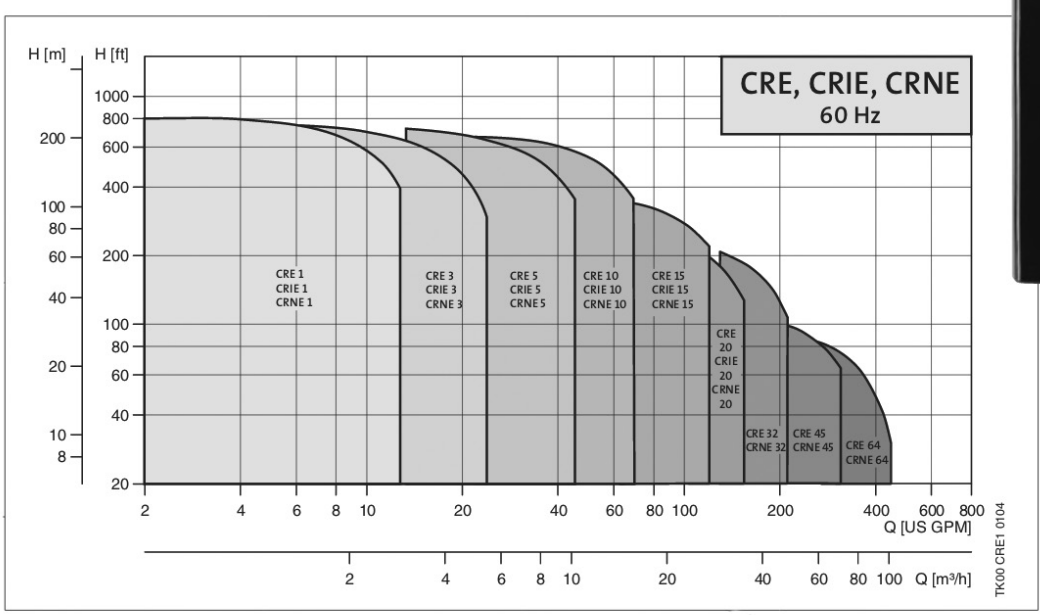
THE GRUNDFOS CRE: ULTIMATE SOLUTIONS

Variable-speed motor
To accommodate the many situations where the required flows and pressures vary considerably over time, CRE pumps have a variable-speed motor that continually adapts pump performance to match current conditions. CRE pumps combine the very best of pump technology with sophisticated motors developed by Grundfos with optimum efficiency in mind.

Do you need constant pressure? Constant differential pressure? Stable pH levels? Specific temperatures? Carefully timed operation? Grundfos CRE can give you all this and much more.

Communication options
CRE can be remote-controlled and/or linked to management systems of your choice for perfect interaction. CRE offers unique posibilities of monitoring the performance and the result of the performance as well as controlling the pump performance. Or both in the same solution.

Ultimate efficiency
CRE variable speed pumps yield constant benefits. With their ability to change speed to suit the demand, you never spend energy generating pressure you do not require. The electronically controlled motors complement the already highly efficient Grundfos CR pumps, saving even more energy and contributing to a very low total cost of ownership. The entire CR range can be fitted with a variable speed motor, meaning that you can enjoy the benefits of the CRE model regardless of what your other requirements may be. CRE pumps combine highly efficient Grundfos CR pumps with our variable-speed motors.





GRUNDFOS®

BOOSTERPAQS

GRUNDFOS HYDRO MPC BOOSTERPAQ MULTI-E, MULTI-B AND CRE-PLUS



As standard, Hydro MPC booster sets consist of two to six CR(E) pumps connected in parallel and mounted on a base frame provided with a control cabinet and all the necessary fittings. Most of the booster sets are available with either CR pumps and/or CRE pumps.

The pumps of the booster set can be removed without interfering with the pipework on either side of the manifolds. Consequently, even on the largest booster sets, service can be performed by a single person with a forklift truck or a crane.

CU 352 MULTI-PUMP CONTROL
The pumps of the Hydro MPC booster system are controlled individually by the CU 352 multi-pump control unit which contains application-optimized software and pump curve data. The CU 352 thus knows the exact hydraulic and electrical data of the pumps to be controlled. Furthermore, a log function enables monitoring of the system performance over a period of time.

USER FRIENDLY
Hydro MPC features a built-in start-up wizard in a wide range of languages that guides the installer through a series of steps until the system is correctly installed and commissioned. When the installation is complete, the large, user-friendly color display will ensure that day-to-day operation is equally easy.

RELIABLE
Hydro MPC is built on the highly renowned Grundfos CR pump range. CR pumps are known for their reliability, efficiency and adaptability. Every vital piece of the Hydro MPC is made by Grundfos. You are thus guaranteed long-lasting technology that requires a minimum of maintenance and provides a maximum of efficiency

Based on the highly efficient Grundfos CR pump range, the sturdy, compact Hydro MPC BoosterpaQ is a fully integrated packaged pumping system designed to handle even the most difficult pumping situations with ease and accuracy. The intelligent CU 352 controller optimizes pump operation based on demand, making the Hydro MPC the most energy-efficient solution for pumping applications with varying flow needs.

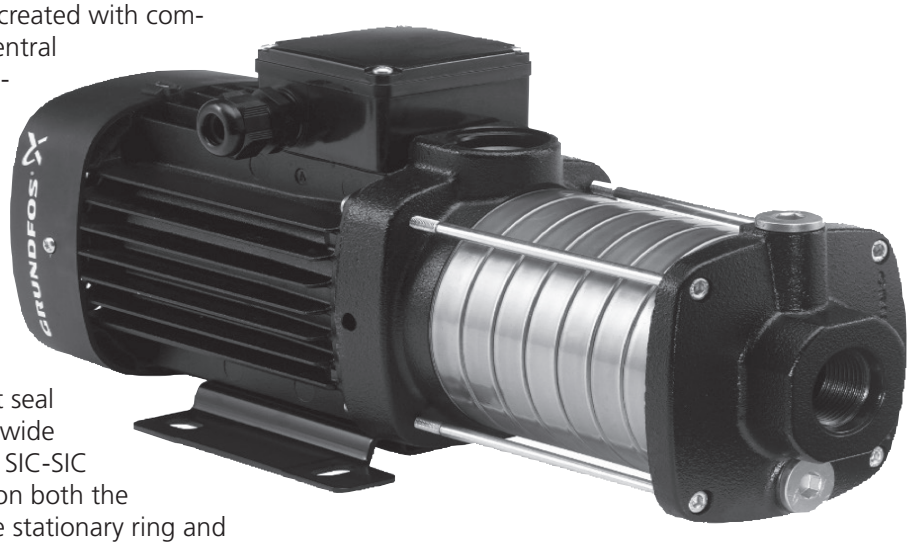
APPLICATIONS
- Water supply systems
- Pressure boosting in high-rise buildings
- HVAC applications
- Industrial plants
- Turf and irrigation"



GRUNDFOS CM, CME SERIES PUMPS
HORIZONTAL MULTISTAGE CENTRIFUGAL

OVERVIEW

The Grundfos CM/CME pump has been created with compactness, flexibility and reliability as its central features. This horizontal multistage close-coupled pump is a compact, reliable and quiet pump designed to work in a variety of applications.



"The difference between the CM and the CME pump ranges is the motor. CM pumps are fitted with mains-operated motors, whereas the motors for CME pumps have an integrated frequency converter and PID controller.

A Grundfos engineered mechanical shaft seal has been designed to eliminate industry-wide problems with shaft seals sticking where SIC-SIC seal faces are used. The solution builds on both the implementation of a rotation stop on the stationary ring and different surface finishing on both the stationary and rotating rings.

A Grundfos engineered mechanical shaft seal has been designed to eliminate industry-wide problems with shaft seals sticking where SIC-SIC seal faces are used. The solution builds on both the implementation of a rotation stop on the stationary ring and different surface finishing on both the stationary and rotating rings.

Available in cast iron or stainless steel 304 or 316."



FLEXIBILITY

The Grundfos CM/CME is designed to be used in a variety of applications, including:
Washing and cleaning (washing machines)
Water treatment
Temperature control (heating/cooling)
Chemical and pharmaceutical industries
Building services
Irrigation

Features

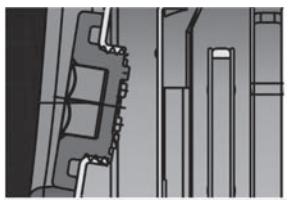
Compact design
Customized solutions
High reliability
Service-friendly
Wide performance range
Low noise level
Electro-coated cast-iron parts
Grundfos motor
Superior dry running capabilities

Benefits

Reduced footprint
Energy saving (CME)
Low maintenance costs
Single pump model for multiple applications
Reduced downtime, High reliability



GRUNDFOS



Filling Plug
Sealed by o-ring for easy maintenance.

DIN, ANSI & JIS Flange Adapter

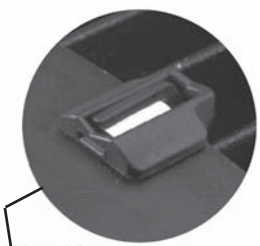


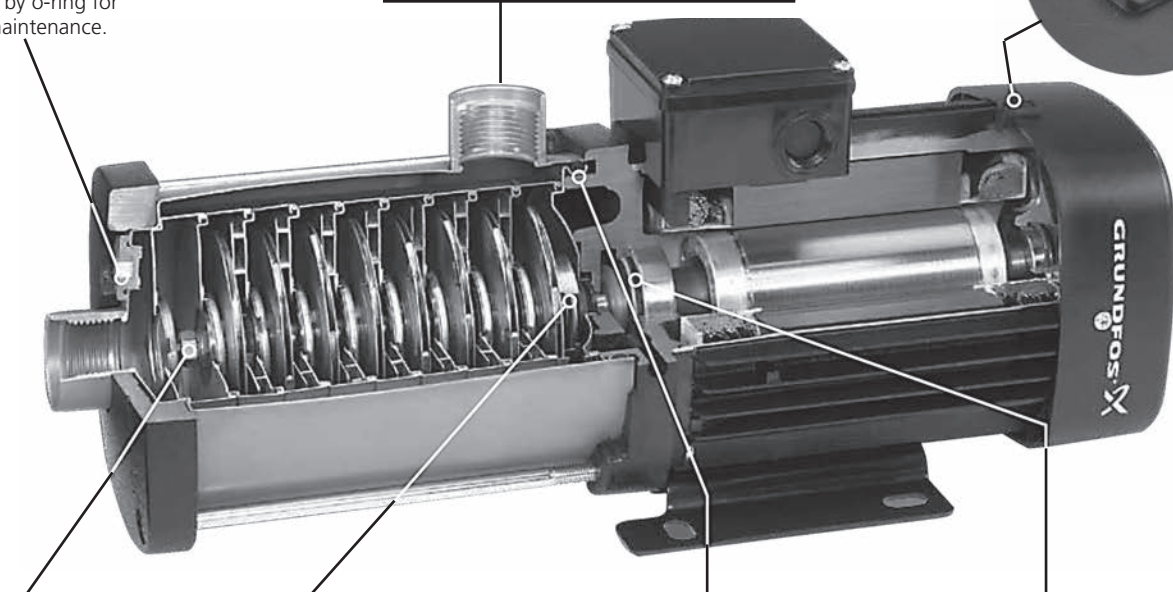
Tri-Clamp Adapter

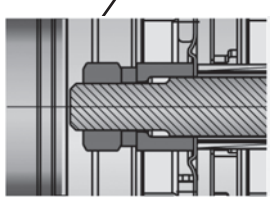
Victaulic Coupling Adapter



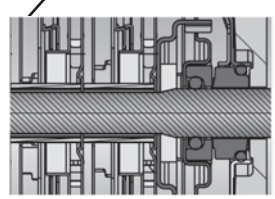
Rotation Indicator
Quickly check if 3-phase electrical connection is correct, white if incorrect.



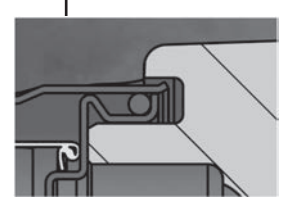




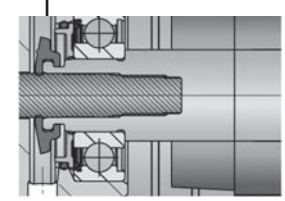
Nordlock© Washer
Ensures secure clamping of pump impellers and provides quick and easy assembly and disassembly.



Grundfos designed
mechanical o-ring shaft seal offers superior dry running capabilities and reduced sticking problems.



Encapsulated sleeve o-ring
Design retains o-ring when temperature change causes expansion and contraction.



Labyrinth Seal
Provides protection for motor bearings and reduces maintenance.



The CME pump has an integrated variable frequency drive and PLC which provides a wide range of unique benefits:

- Energy consumption reduced by up to half compared to fixed speed pumps
- The pump, motor and VFD is a compact system manufactured by Grundfos
- Reduced installation and wiring costs
- Easy installation
- The functionalities are designed for specific pump applications
- Wide range of control parameters



CME Plus pump for constant pressure control The CME Plus utilizes a "plug and pump" technology. The CME Plus pump with pressure sensor is preprogrammed for operation. The only set up required at commissioning is to adjust the setpoint pressure.

CM/CME Technical Data

Power	Temperature	Flow	Pressure	Standard Connections
0.3 to 8.4 HP	-22°F to +248°F	1 to 160 GPM	Max Head: 170 psi (393 ft) Max Operating: 232 psi	1" NPT 1 1/4" NPT 1 1/2" NPT 2" NPT

GRUNDFOS



Features & Benefits
Compact design
High reliability
Service-friendly
Wide performance range
Low noise level
High-performance hydraulics
Electro-coated cast-iron parts
Grundfos motor

GRUNDFOS CME PLUS SERIES PUMPS

CME Plus pumps are built on the basis of CME pumps. In addition to the features of a standard CME, the CME plus includes a pressure sensor, expansion tank, and discharge piping making it a complete package ready for constant pressure applications.

The CME Plus provides constant water pressure for a variety of domestic applications. This means that the end-user is no longer bothered by fluctuations in water pressure due to a rise or fall in demand, or from pump starts and stops. CME Plus keeps the pressure within the home up regardless of usage. The constant pressure feature provides the benefit of increased comfort.

In addition the CME Plus makes it possible to personalize the water pressure. By the touch of a button the pressure level is increased or decreased as desired.

The CME Plus incorporates a stop function ensuring that the pump automatically stops if the water demand drops to a very low level or disappears altogether. The method gives good total operating economy irrespective of the water demand, and the pump is not subjected to overheating and the subsequent risk of damage to the shaft seal.

GRUNDFOS GO REMOTE

Grundfos GO is the mobile tool box for professional users on the GO. Grundfos GO gives you intuitive handheld pump control, and full access to all the Grundfos Online tools on the go. Grundfos GO consists of two Apps: GO Remote and GO CAPS.
Grundfos GO Remote gives you intuitive handheld pump control. Save valuable time on pump control, data collection and reporting with the most comprehensive mobile platform on the market. Grundfos GO Remote works with all our E-pumps and communicates both using both radio and infra-red technology. It provides easy-to-follow tips and guidance as well as live pump data feeds. To communicate with the pumps, special hardware (Mobile Interfaces) from Grundfos is required. The Grundfos GO Remote app can be downloaded for free for both Apple iOS and Android devices.

The mobile app, available on Apple iOS and Android devices, includes the following features:
- Search product by: Number, Name or QR code
- Size a product (Heating, Air-conditioning, Pressure boosting & Wastewater)
- Catalog
- Replace product
- Compare products
- Product view
- Projects and Favorites



GRUNDFOS MTR - SPK - CRK - MTC



OVERVIEW

"MTR, SPK, CRK, and MTC pumps are vertical multistage centrifugal pumps designed for pumping of cooling lubricants for machine tools, condensate transfer and similar applications.
The pumps are designed to be mounted on top of tanks with the pump stack immerged in the pumped liquid.
Grundfos MTR, SPK, CRK, and MTC pumps come with various pump sizes and various numbers of stages to provide the flow, the pressure and the length required.
The MTR, SPK, and CRK pumps consist of two seperate main components: The motor and the pump unit. The MTC pump is close coupled and the motor and pump end cannot be seperated.
The pump unit consists of optimized hydraulics, various types of connections, a motor stool, a given number of chambers and various other parts.

APPLICATIONs

The immersible pumps are suitable for liquid transfer in all applications where you have a tank, including:

- Lathes
- Milling machines
- Boring machines
- Drilling machines
- Machining centers
- Grinding machines
- Filtering systems
- Swarf conveyors
- Spark machine tools
- ndustrial washing machines
- Cooling units

FEATURES & BENEFITS

- Flexible installation length
- Wide performance range
- Reliability
- Service-friendly
- Simple installation

GRUNDFOS®



GRUNDFOS MTR - SPK - CRK - MTC

AMERICAN STAINLESS PUMPS

Stainless Steel Pumps for the Commercial Marketplace



- American made products at a competitive price
- Nozzles & fittings can be customized for Original Equipment Manufacturers
- Quick leadtimes for stock or custom products
- Pumps built to order per customer specifications

7SP CENTRIFUGAL PUMPS

- Single stage high pressure pump produces up to 88 psig
- Flow Rates up to 70gpm
- System pressures up to 120 psig
- Temperatures up to 250°F
- Impellers up to 7.24" in diameter
- Service in both 50 and 60Hz
- 56J Frame: 2 through 5HP motors available
- 1.0" x 1.25" NPT Connections
- Multiple mechanical seal configurations



SSP/C CENTRIFUGAL PUMPS

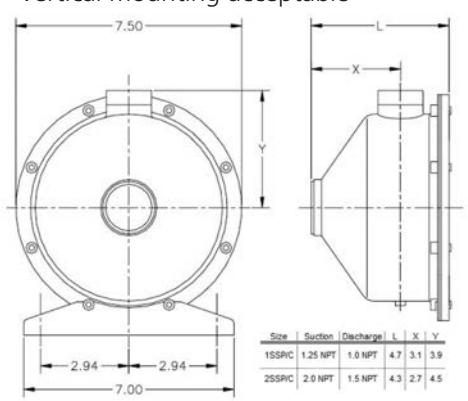
- Flow Rates up to 250gpm
- System pressures up to 125 psig
- Temperatures up to 250°F
- Impellers up to 5.75" diameter produce 55psig
- Service in both 50 and 60Hz
- 1.0" x 1.25" and 1.5"x2.0" NPT connections available





Custom pumps and nozzles for OEM applications

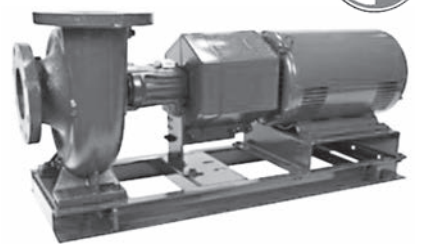
- Close Coupled End Suction Centrifugal Pumps for the Commercial Marketplace
- Stamped Stainless components provide high efficiencies
- Thick nozzles prevent damage during piping
- Multiple mechanical seal configurations
- Vertical mounting acceptable



Size	Suction	Discharge	L	X	Y
1SSP/C	1.25 NPT	1.0 NPT	4.7	3.1	3.9
2SSP/C	2.0 NPT	1.5 NPT	4.3	2.7	4.5

END SUCTION PUMPS

Bell & Gossett®



Floor mounted End Suction Pumps with foot supported volutes in several designs. Small maintenance-free pumps, foot mounted close coupled cast iron pumps, small foot mounted close coupled stainless steel pumps, base mounted pumps; flows to 4,000 GPM

B&G Series e-1510 Base Mounted End Suction

Bell & Gossett has redesigned the complete line of its best-in-class 1510 pump – now called the e-1510– to provide the highest overall efficiency in the end-suction market for HVAC and plumbing applications. With the largest Efficiency Island compared to other similar pumps, the e-1510 reduces electricity consumption, improves overall system performance and lowers life cycle costs.
The Series e-1510's dramatic improvement in efficiency is the result of cutting edge computational fluid dynamics (CFD) design technology, deep hydraulic engineering expertise, and Xylem's comprehensive knowledge of HVAC and plumbing applications. The new Bell & Gossett Series e-1510 is available in 26 sizes and a variety of configuration options that enables customization and flexibility to fit a broad range of operating conditions.



B&G Series 1522

Foot-mounted, close-coupled design in 3/4" through 1-1/2" sizes. 1/4 to 1 HP at 1750 RPM. Available in bronze-fitted, all-bronze and all-iron construction with flows to 115 GPM at 30 feet.
The Series 1522 is a rugged yet quiet pump due to the bronze sleeve bearing provided as standard on the pump and motor. The flexible spring coupler design between the pump and motor dampens any additional noise and vibration.

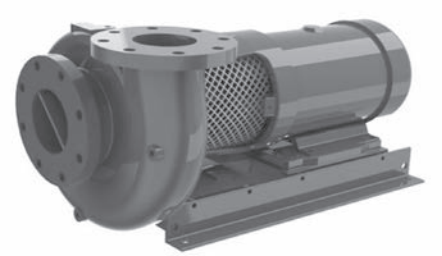


B&G Series 1531

End suction, close-coupled, foot-mounted pump available in 1-1/4" through 6" sizes. Motor size 3/4 to 50 HP at 1750 RPM, 2 to 60 HP at 3500 RPM. Available in bronze-fitted and all-iron construction with flows to 2300 GPM, heads to 400 feet. Close-coupled, space-saving economy plus rugged construction make the Series 1531 an ideal selection for a variety of horizontal and vertical mount applications. Available with the B&G standard self-flushing Carbon/ Ceramic mechanical seal in 175# working pressure design.

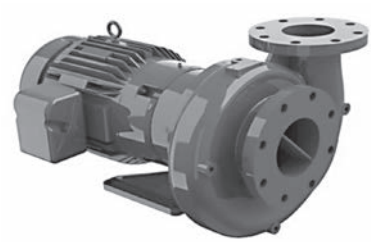
PACO® PUMPS

Type LCS



LCS is a single stage, end suction, split coupled, base mounted centrifugal pump. With its smaller foot print with no alignment and grouting requirement in the field makes it a unique pump design. The pump features axially split coupling which is capable of withstanding all torsional, axial, and radial loads. They are available in different sizes to match up HP requirements up to 125HP

Type LC



LC is a Close Coupled, single stage, end suction centrifugal pump. The PACO Close Coupled design features a short shaft for minimum overhang and minimum shaft deflection. All models may be mounted vertically or horizontally, with discharge connections available in several positions.

Type LF



LF is a Frame Mounted, single stage, end suction centrifugal pump. The PACO Frame Mounted pumps with their heavy frames, shafts and ball bearings are ideal for reliable heavy duty service. They are available in 6 different frame sizes to match HP requirements up to 300 HP.

U.S. SEALS



COMPLETE STOCK!
CALL WITH YOUR REQUIREMENTS!
WE CAN MATCH ANY SAMPLE!

Come Visit Us!

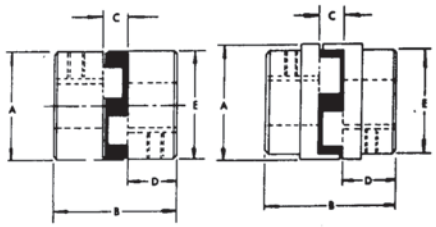
You are always welcome at DUFF Co.
201 Lafayette Street
Norristown, PA



LOVEJOY COUPLINGS



TYPE L



Style 1 Style 2

Must have shaft size of driver and driven!

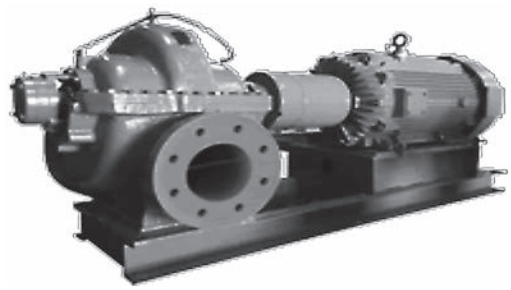
SEE HEATING SECTION FOR WOODS AND B&G COUPLINGS

	BORE		DIMENSION IN INCHES					Complete Coupling		Spider	
Style #	Min	Max	Outside Dia (A)	Overall Length (B)	Distance btwn flanges (C)	Lngth thru bore (D)	Hub Dia (E)	Fig. No.	Price	Fig. No.	Price
1	1/8	3/8	5/8	13/16	9/32	17/64	5/8	10779		10788	
1	1/4	5/8	1 5/64	1 23/32	15/32	5/8	1 5/64	10783		10790	
1	1/4	3/4	1 23/64	2	1/2	3/4	1 23/64	10786		10793	
1	1/4	7/8	1 3/4	2 1/8	1/2	13/16	1 3/4	10752		10797	
1	1/4	1	2 7/64	2 1/8	1/2	13/16	2 7/64	47660		39908	
1	7/16	1 1/8	2 7/64	2 1/2	1/2	1	2 7/64	10756		10799	
1	1/2	1 3/16	2 17/32	2 7/8	3/4	1 1/16	2 17/32	10762		10802	
1	1/2	1 3/8	2 17/32	3 1/2	3/4	1 3/8	2 17/32	10763		10807	
1	5/8	1 5/8	3 5/16	4 1/4	7/8	1 11/16	3 5/16	10769		10809	
1	5/8	1 7/8	3 3/4	4 1/2	1	1 3/4	3 3/4	10772		10813	
2	3/4	2 1/8	4 1/2	5 1/4	1	2 1/8	4	10775		10816	
2	3/4	2 5/8	5	6	1	2 1/2	4 1/4	10778		10819	

PACO® PUMPS

Paco KP Split Case

KP is a Horizontal Split Case double suction centrifugal pump. Pump casings are horizontally split at the shaft centerline to simplify inspections and maintenance. Double suction impellers are dynamically and hydraulically balanced and are available in bronze, stainless steel, and other special alloys for specific applications. The cartridge type bearing housings allow a short bearing span for minimum shaft deflection. Oversized heavy duty ball bearings provide long, trouble-free service in continuous operations.



PEERLESS PUMP®

Peerless Pump is one of the largest manufacturers of vertical pumps in the industry. With over 70 years of progressive Peerless designing, engineering and manufacturing, our pumps are proven with thousands of single and multiple vertical pump unit installations around the world.



F SERIES

They are general purpose, frame mounted, end suction pumps flexibly coupled to drivers and equipped with coupling guards. Each entire unit can be mounted on a steel base. An optional drip pan is available.

Peerless F Series pumps are designed for applications in medium duty service, providing maximum pump value in heating and air conditioning, booster and general circulating service.

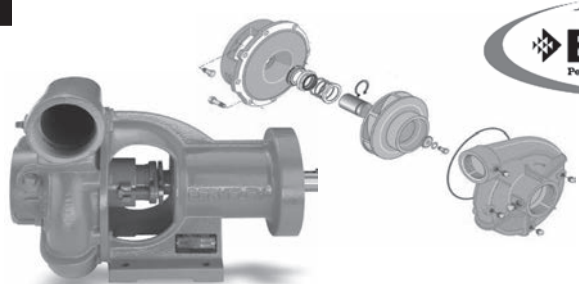


Peerless S Series End Suction Pumps

These are close coupled with standard C-face JM or JP solid shaft ball bearing motors specifi cally designed for pump applications in accordance with standards developed by the Hydraulic Institute (HI) and the National Electrical Manufacturers Association (NEMA).

Peerless Pump Series C close coupled single suction pumps are designed for applications in medium duty service and provide maximum pump value in heating, air conditioning, booster and general circulating service.

BERKELEY Pentair Water



Frame Mounted Centrifugal Series

BERKELEY Type B frame-mount centrifugal pumps are designed for the user who has a separate power source suitable for driving through couplings or with belts. Ideal for all general purpose applications requiring high performance, moderate initial cost and easy maintenance.

Key Features:

- Volute Case Incorporates Precise Geometric Design for Increased Hydraulic Efficiency
- Thick-Walled Close-Grained Cast Iron to Handle the Stresses of Everyday Use
- Back Pull-Out Design Allows Easy Removal And Service Without Disturbing Piping Connections
- Enclosed Impeller Designed and Machined to Optimize Performance and Operating Efficiencies
- Discharge May Be Rotated To Any of Four Positions for Piping Convenience



SSCX Series

High-head performance and quiet operation join corrosion-resistant dependability with BERKELEY SSCX Series centrifugal pumps.

Key Features:

- Stainless-Steel Housing and Shaft – Maximum corrosion resistance in chemical as well as water applications; smooth flow path assures quiet operation.
- High-Temperature Rating – The SSCX Series centrifugal pump (with 304 SS Impeller) is designed for temperatures to 250°F, making it an ideal choice for a wide range of pump applications and varying temperature conditions. The Noryl® impeller is rated to a maximum operating temperature of 185°F.
- Mechanical Shaft Seals – Choice of seal options to meet your application needs. All are precision lapped and highly polished for long life and reliability.
- Impeller Options – 304 Stainless Steel or precision-molded Noryl® feature ultra-smooth flow ports to maximize performance and efficiency.
- Drain/Vent Ports – Priming and draining is easier, faster.

PENTAIR

AURORA®

Vertical Multi-Stage Centrifugal Pumps

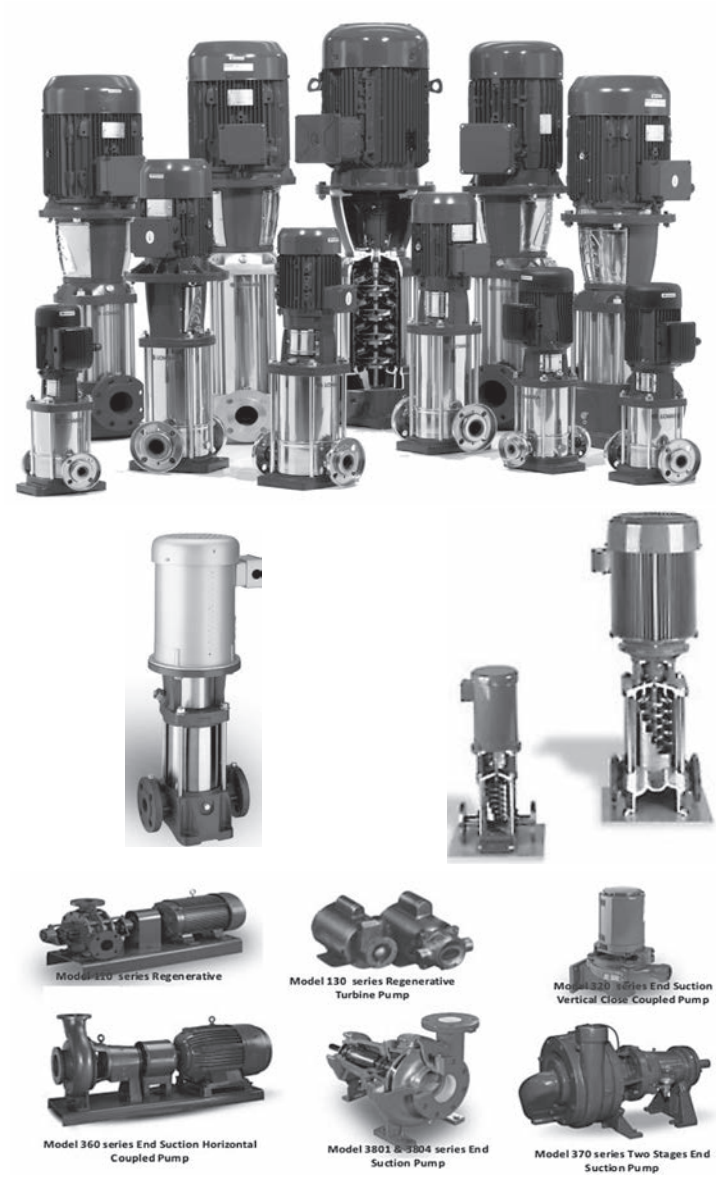
The PVM and PVMX are vertical in-line multistage pumps with stainless steel stage construction. PVM models are available with flanged/NPT or grooved connections. PVMX models are available in flanged, grooved or NPT connections. Premium efficiency motors are standard for 230/460V, EPACT efficiency for all other voltages. Pump shafts are directly coupled to NEMA standard motors.

Key Features:

- Flow series: 1, 3, 5, 10, 15, 20, 33*
- Flanged, NPT or grooved connections
- Cartridge Mechanical Seal - can be replaced easily without dismantling the pump
- Continuous-duty, best in class, high efficiency designs
- Heavy-duty cast motor bracket insures proper motor alignment
- High-thrust TEFC enclosure motor options
- Versatility in performance and design
- Retrofits easily in existing and new installations, reducing valuable downtime, lowering operating costs

Typical Applications Include:

- Commercial Pressure Boosting
- Boiler feed, Condensate Systems
- Agricultural and Commercial Irrigation
- Pulp, Paper and Lumber Mining
- Petrochemical: Refinery and Offshore Drilling
- Car and Truck Wash Systems
- Jockey Pump for Fire Protection



Duff Co. is your source for Grundfos parts. Call the experts at Duff today!



If you need Grundfos parts — we have them!

Flanges • Bearing Assemblies • Gaskets • Bodies • Couplers • Hardware Kits • Impellers • Mechanical Seals • Key Shafts
ANY & ALL SERVICE KITS & SPARE PARTS

GRUNDFOS®

Duff Co. is also a distributor for the following pump & motor brands as well as their spare parts:

- B&G
- Franklin Motors
- Barnes
- Myers
- Ebara
- Taco
- American Stainless
- Paco
- Red Jacket

PENTAIR MYERS®

Myers Sump, Sewage & Effluent Pumps

Myers offers a complete line of sump pumps, sewage pumps and effluent pumps that began with our dependable double-acting hand pumps back in 1870. All your wastewater pumping needs can be satisfied with one stop at a Myers distributor. As a part of Pentair Water, Myers continues to set the standard for quality, value, and reliability for the customer who demands the best quality sewage pumps, sump pumps, and effluent pumps available.



OUR MOST POPULAR MYERS PUMPS



Model ME50S-11 Effluent Pump

Ideal for mount and trench pressure distribution systems; effluent removal; water transfer.
1/2 HP, 115-volt, 1-ph / 2" discharge, 20' cord
Pressure to 95' head, flows of 120 gpm

Fig. No.
142159



Model WG30-WGX30 3 Centrifugal Grinder Vortex Impeller

Rugged grinder pump for higher flows at low-to-moderate heads. Heavy duty cutter and recessed impeller.
3 HP, 230-volt, 3-ph / 2-1/2" flanged discharge
Pressure to 92' head, flows of 185 gpm

Fig. No.
304706



Model WG20/WGX20 Centrifugal Grinder Vortex Impeller

Rugged grinder pump for pressure sewer applications or systems with long discharge runs or high static heads. Heavy duty cutter and recessed impeller.
2 HP, 230-volt, 1-ph / 1-1/4" NPT discharge
Pressure to 105' head, flows of 70 gpm

Fig. No.
308821



Model SRM4P-1 Sewage Pump

Versatile, long lasting option for sewage and septic pumping applications.
4/10 HP, 115-volt, 1-ph / 2" NPT discharge, 10' cord
Pressure to 19' head, flows of 95 gpm

Fig. No.
141211

PENTAIR HYDROMATIC®

The Hydromatic brand of pumps has been merged into the Meyers family of products. Call us to cross-reference your old Hydromatic pumps and parts.





Model SKHS Series Sewage Ejectors

Designed specifically for residential and commercial building applications. 1/2 to 2 HP, 230-/460-volt, 1-/3-ph / 2" NPT discharge, 20' cord

Fig. No.	OEM No.	Description
Call for configurations availability & in stock	SKHS50	140 gpm, 45'
	SKHS100	140 gpm, 58'
	SKHS150	140 gpm, 70'
	SKHS200	140 gpm, 80'



Model HPGR Series Grinder Pumps

Ideal for high-head applications, such as single-family residences and cottages.
2 HP, 230-volt, 1-ph / 1-1/4" NPT discharge, 20' cord
Pressure to 105' head, flows of 53 gpm

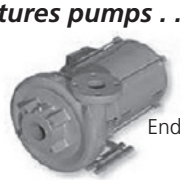
Fig. No.	Description
Call for configurations avail. & in stock	

Thrush Co. Inc.

You know Thrush Co., Inc. manufactures pumps . . .



In-Line Centrifugal Pumps

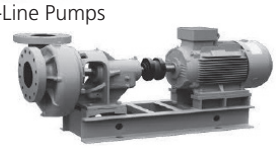


End Suction Pumps





Vertical In-Line Pumps



Base-Mounted End Suction Pumps

. . . Thrush Co., Inc. also designs and manufactures various hydronic and HVAC products!



Heat Exchangers



Replacement Tube Bundles

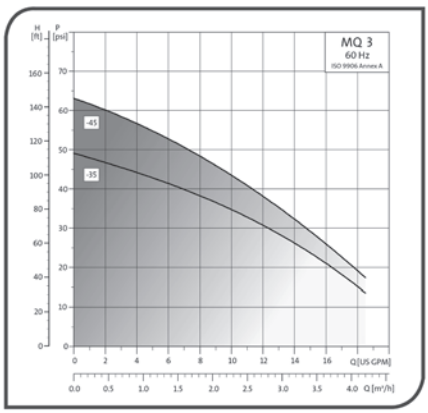


Air Serparators

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS PRESSURE BOOSTING PUMPS

Performance Curve:



Pump Type	Volts	Material #
MQ 3-35	115	96860172
MQ 3-45	115	96860195
MQ 3-35	230	96860201
MQ 3-45	230	96860207

Grundfos MQ

The Grundfos MQ pump is a compact booster system designed for domestic, agricultural and horticultural applications. It's an all-in-one pressure booster unit that's easy to install and simple to operate.

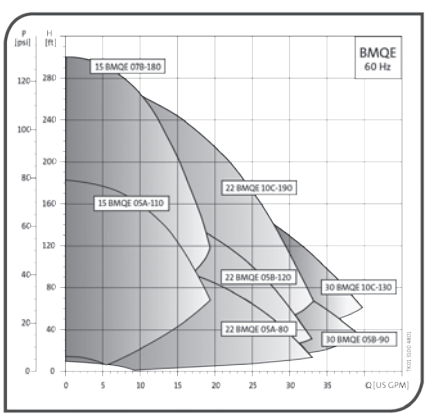
The MQ pump is commonly used:

- in private homes
- in summer houses and weekend cottages
- on farms
- in market gardens and other large gardens.s built-in dry-run protection, and operates with low noise.

Fig. No.	Description
121103	MQ 3-35 (115v, 3/4 HP)
121105	MQ 3-45 (115v, 1 HP)
121107	MQ 3-35 (230v, 3/4 HP)
121108	MQ 3-45 (230v, 1 HP)
128756	MQ 1 " FITTING KIT
177818	MQ SHAFT SEAL KIT
231552	MQ PRESSURE TANK



Performance Curve:



Pump Type	Volts	Material #
15 BMQE 05A-110	115	91128524
15 BMQE 05A-110	230	91128525
15 BMQE 07B-180	230	91128526
22 BMQE 05A-80	115	91128527
22 BMQE 05A-80	230	91128528
22 BMQE 05B-120	230	91128529
22 BMQE 10C-190	230	91128530
30 BMQE 05B-90	230	91128531
30 BMQE 10C-130	230	91128533



Fig. No.	Description
91128524	15 BMQE 05A-110 (115v, 1/2 HP)
91128525	15 BMQE 05A-110 (230v 1/2 HP)
91128526	15 BMQE 07B-180 (230v 3/4 HP)
91128527	22 BMQE 05A-80 (115v 1/2 HP)
91128528	22 BMQE 05A-80 (230v 1/2 HP)
91128529	22 BMQE 05B-120V 1/2 HP)
189951	22 BMQE 10C-190 (230V 1HP)
91128531	30 BMQE 05B-90 (230v 1/2 HP)
198307	30 BMQE 10C-130 (230v 1 HP)

Grundfos BMQE

The Grundfos BMQE is a complete constant pressure boosting system. Its rugged design and easy-to-use interface ensures low-maintenance and trouble-free operation. It's designed to provide constant pressure at the touch of a button, and specifically engineered for applications with low incoming or high fluctuating water presssure.

System consists of an in-line pump, pressure transducer, controller and small diaphragm tank.

Key Features:

- Complete System
- Dry-run protection
- Standard home outlet voltages (1 ph)
- Can be wall-mounted, in-ground, framed or even portable



SCALA2 — PERFECT WATER PRESSURE

FULLY INTEGRATED - COMPACT DESIGN - EASY TO INSTALL

GRUNDFOS SCALA2 is a fully integrated water booster pump delivering perfect water pressure to all taps. It features pump, motor, tank, sensor, drive and non-return valve in one compact unit that installs quickly and easily.
With its intelligent pump control, SCALA2 adjusts performance to any demand – and with its water-cooled motor, it offers one of the lowest noise levels in its class. The result is maximum comfort with minimum effort.



Key features

- Intelligent pump control
- Water-cooled, permanent magnet motor
- Dry running protection
- Self-priming
- User friendly control panel
- Outdoor-ready
- Easy sizing and selection

APPLICATIONS

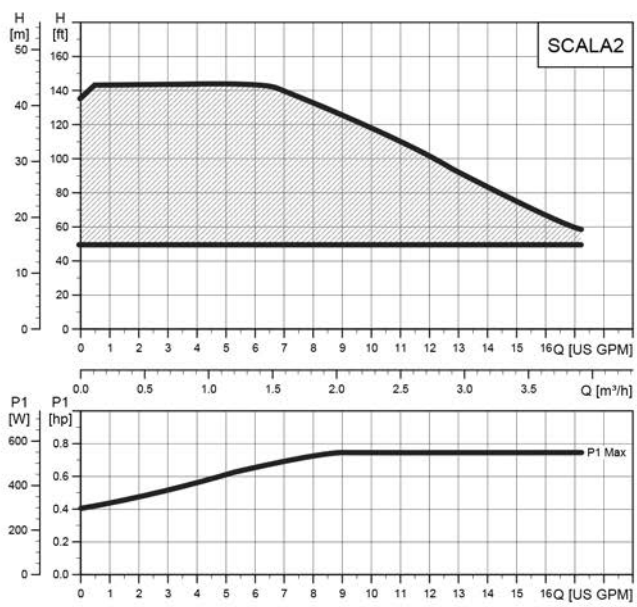
Perfect water pressure: Intelligent pump control adjusts operation to ensure perfect water pressure at all times.
Low noise: With a noise level of 47 dB(A) in typical use, SCALA2 is one of the quietest boosters in its class.
Easy selection: One variant for all domestic applications.
Easy installation: Compact, all-in-one solution for perfect installation in no time.
Easy to operate: User-friendly control panel for easy set-up.

BENEFITS

SCALA2 is designed for pressure boosting in single family houses and apartments.
Boosting from mains: Increases the water pressure delivered by city mains.
Boosting from tanks: Increases water pressure from roof tanks, break tanks and ground tanks, including rainwater tanks.
Boosting from wells: Pumps water from a depth of up to 26 feet (8 meters).
Indoor and outdoor installation: NEMA 3

GRUNDFOS®

PERFORMANCE CURVE



TECHNICAL DATA

Max. ambient temperature	131°F / 55°C
Max. liquid temperature	113°F / 45°C
Max. system pressure	145 psi / 10 bar
Enclosure rating	NEMA 3
Floors	Max. 3
Taps	Max. 8
Dimensions	H: 11.9 in / 302 mm L: 15.9 in / 403 mm W: 7.6 in / 193 mm
Weight	22 lbs / 10 kg

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

WELL PUMPS

For groundwater and irrigation applications, Duff supplies pumping systems and accessories that provide a reliable supply of fresh water and increase crop productivity to keep your customers satisfied. We are also experts in environmental well pumps and motors.

Grundfos Residential Groundwater

A reliable supply of fresh water is a basic necessity for all homeowners, especially for those whose source is a private groundwater well. Combined with our pump experts' vast experience and knowledge, plus our deep stock of inventory, We almost always have a product for your application.

A full range of pumps to meet your needs

We have the ideal groundwater pump to efficiently meet the needs of every water well requirement, from deep to shallow, from high- to low-volume needs. Not sure what pump is best suited for your project? Contact a Duff professional today!

Constant Pressure Pump System

With constant pressure pumping systems, water pressure remains steady and constant regardless of how many family members are using water. As more faucets are opened, the pump automatically increases its speed, maintaining the chosen pressure at any flow rate.



The Grundfos SQE constant pressure system consists of a pump and motor which resides in the well and is controlled by the **CU301 User Interface** panel conveniently located in the home or outdoors.
For more information, see pages 408-409.

DWC Well Pumps

In addition to Grundfos pumps, Duff offers the **DWC brand conventional submersible well pump**. Made in entirely in the USA, this pump offers superior performance and exceptional resistance to abrasives, due to its unique floating stack design. Other highlights include:

DWC
DUFF WATER CONDITIONING

- Precision machined, cast 304 stainless steel discharge head with a built-in check valve and cast rope loop.
- Enclosed urethane bearing, mounted in the polycarbonate top diffuser.
- Injection molded polycarbonate diffuser plates for smoothness and high efficiency with high-impact resistance.
- Glass-reinforced Noryl impellers for high strength and optimal abrasion resistance.
- Corrosion and abrasion resistant stamped 304 stainless steel bowls.
- Thick wall, 304 stainless steel seamless pump housing accurately aligning the entire assembly while eliminating deterioration from water conditions or electrolysis.
- A 304 stainless steel cable guard to protect motor leads from abrasion and cutting.

Environmental Well Pumps & Motors

For environmental applications where the pump and motor must withstand corrosive conditions, proper selection of equipment is essential. We will help you find the right combination of pump, motor and leads.

The **Grundfos Redi-Flo3 SQE-NE** well pump is ideal for the removal of polluted groundwater in wells at least 3" in diameter. The optional **CU 300 Status Box** and **MI301 Remote** communicate with the pump's electronics through the standard power leads.



Typical applications include: environmental remediation, leachate extraction, total fluids recovery, tank-to-tank transfer, and sampling.

We specialize in custom motor leads for Franklin Electric and Grundfos motors

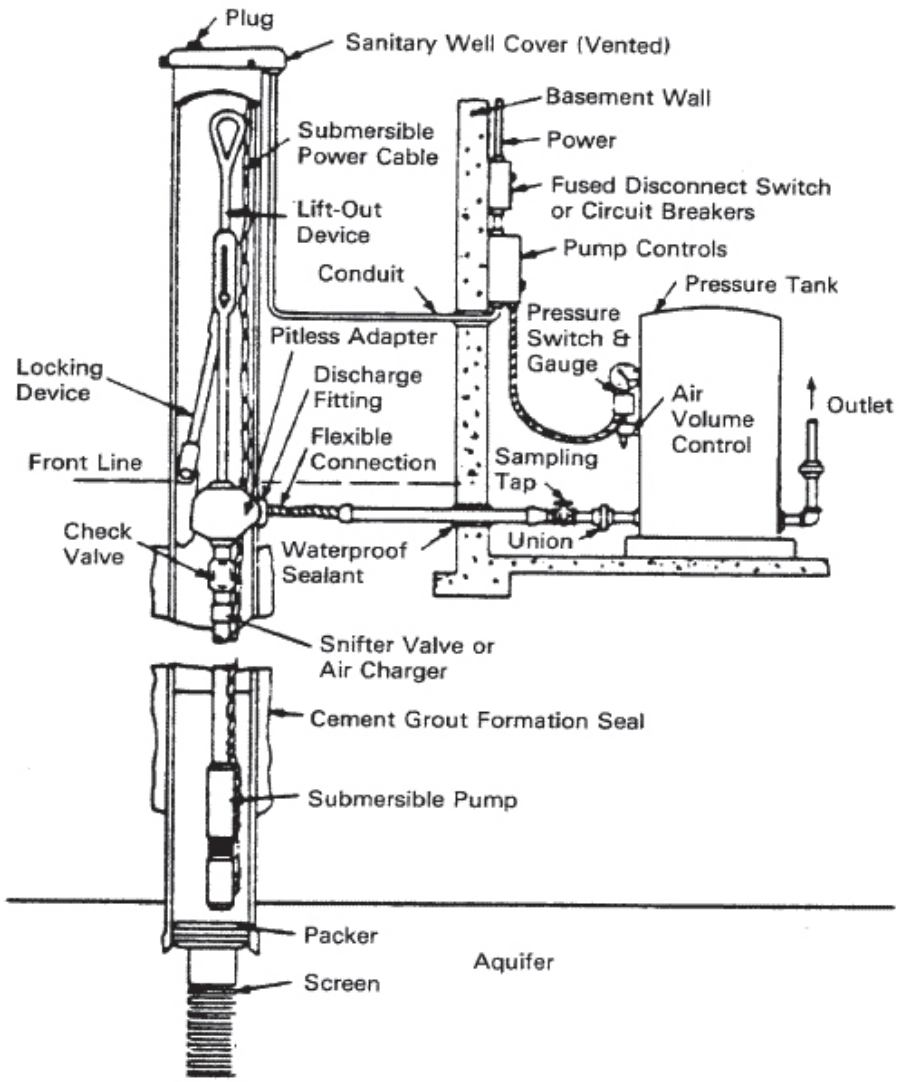
The continuous motor leads allow the motor to be installed without making an underwater splice. Because of the harsh nature of many environmental remediation sites, continuous motor leads come in a variety of chemical- and heat-resistant materials such as **TEFLON®, CPE/XLPE, HILO, SOOW** and **PVC**. These motor leads can be manufactured to the specific depth of the well and many are in stock in 25' increments. If you're looking for something special, just let us know!



Inquire with a Duff pump expert about special **TEFLON®**- and **TEFZEL®**-fitted pump ends.

Don't hesitate to contact us if you have any questions about what pump system is right for your application, if you need help sizing the pump or if you would like some help trouble-shooting. We offer emergency service, 24 hours a day, every day of the year. We're available at your convenience.

BASIC SUBMERSIBLE PUMP INSTALLATION



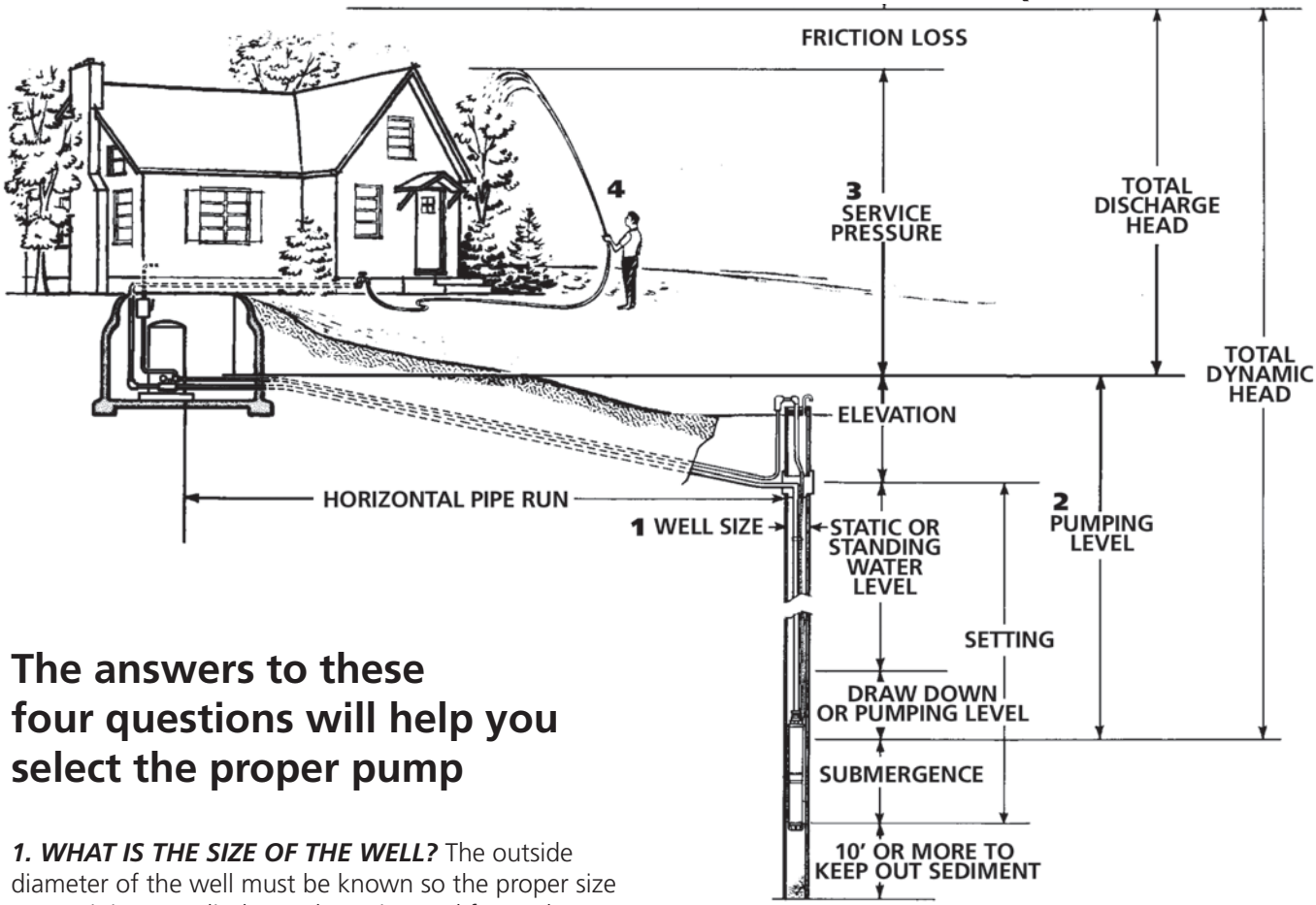
MATERIALS NEEDED

- Electric cable
- Insulation splice kit
- Ground wire
- Flexible plastic pipe
- Hose clamps and pipe fittings
- Check valve
- Well seal or pitless adapter with galvanized riser pipe
- Pressure switch
- Pressure gauge
- Voltage surge protector
- Torque arrestor
- Control box required on all 3-wire models

CONTACT US FOR A COMPLETE CATALOG ON GRUNDFOS



HOW TO SELECT THE CORRECT SUBMERSIBLE PUMPING EQUJIPMENT



The answers to these four questions will help you select the proper pump

1. WHAT IS THE SIZE OF THE WELL? The outside diameter of the well must be known so the proper size pump, injector, cylinder or drop pipe and foot valve can be determined.

2. WHAT IS THE PUMPING LEVEL? The vertical distance in feet from the pump to the water level while the pump is operating. If the pump is installed away from the well and is on higher ground, this elevation must also be included. Most wells draw down while being pumped so this must not be confused with the standing water level.

3. WHAT SHOULD BE THE AVERAGE DISCHARGE PRESSURE? Usual average discharge pressure is 30 lbs.— halfway between the 20 lb. to 40 lb. switch setting of most water systems. When the tank is installed away from the pump at a higher level, or when house or yard fixtures are above the pump and tank, a greater pressure is needed and a larger pump must be used.

4. WHAT CAPACITY IS REQUIRED? The discharge capacity of the pump in gallons per hour that is needed for satisfactory service. The pump should have enough capacity so that it does not need to work more than the equivalent in intermittent service of 2 hours per day. See table of water requirements at right.

AVERAGE WATER REQUIREMENTS FOR GENERAL SERVICE AROUND THE HOME AND FARM

Each person per day, for all purposes	75 gal.
Each horse, dry cow or beef animal	12 gal.
Each milking cow	35 gal.
Each hog per day	4 gal.
Each sheep per day	2 gal.
Each 100 chickens per day	4 gal.

AVERAGE AMOUNT OF WATER REQUIRED BY VARIOUS HOME AND YARD FIXTURES

Drinking fountain, continuously flowing	50-100 gal./day
Each shower bath	up to 30gal. @ 3-5gpm
To fill bathtub	35 gal.
To flush toilet	6 gal.
To fill lavatory	2 gal.
To sprinkle 1/4" of water on each 1000square feet of lawn	160 qal.
Dish Washing Machine - per load	7 gal.@ 4GPM
Automatic washer - per load	Up to 50 gal. @4-6 GPM
Regeneration of Domestic Water Softener	50-100 gal.

AVERAGE FLOW RATE REQUIREMENTS BY VARIOUS FIXTURES

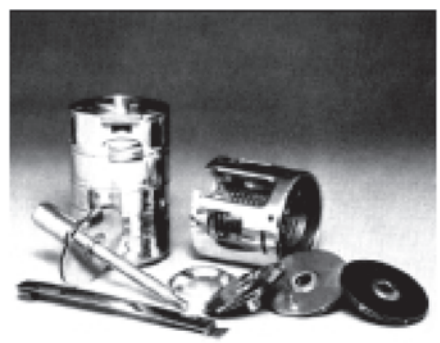
(gpm. = gal. per minute; gph. = gal. per hour)

Shower	3.5 gpm
Bathtub	3.5 gpm
Toilet	3.0 gpm
Lavatory	3.0 gpm
Kitchen sink	2-3 gpm
1/2" hose and nozzle	200 gph
3/4" hose and nozzle	300 gph
Lawn Sprinkler	120 gph



GRUNDFOS PUMP SELECTION GUIDE

Model	Min. Well Size	Flow Range (GPM)	Max. Shutoff Head (Feet)	Max. Shutoff Head (PSI)
5S	4"	0.7 - 6.8	1260	545
7S	4"	0.7 - 9.5	860	372
10S	4"	1.4 - 13.8	1625	703
16S	4"	2 - 20.7	2175	942
25S	4"	3.5 - 34.5	1500	649
35S	4" / 6"	3.5 - 45.5	1940	840
45S	4" / 6"	4.5 - 58.8	1940	840
62S	4" / 6"	6 - 80.5	670	290
77S	4" / 6"	8 - 96	570	247



FEATURES

Smooth safety hook prevents frayed safety line.
Built-in, jam free checkvalve designed for failsafe operation.
Snapguard cable guard is designed for installation and removal. Hold tight and provides maximum protection to motor leads.
Precision Form impellers are fabricated from stainless steel to provide long pump life, maximum hydraulic efficiency and top pump performance.
Exclusive prime inducer provides maximum pump protection from dry-run damage during low water situations.
Pump inlet is totally screened to prevent damage from debris.
All Grundfos submersibles are performance tested at the factory to verify specified performance.

GRUNDFOS®



DUFF gladly accepts VISA & Mastercard

DUFFGUIDE:

See page 438 for Well-X-Trol tanks, as well as galvanized and fiberglass retention tanks

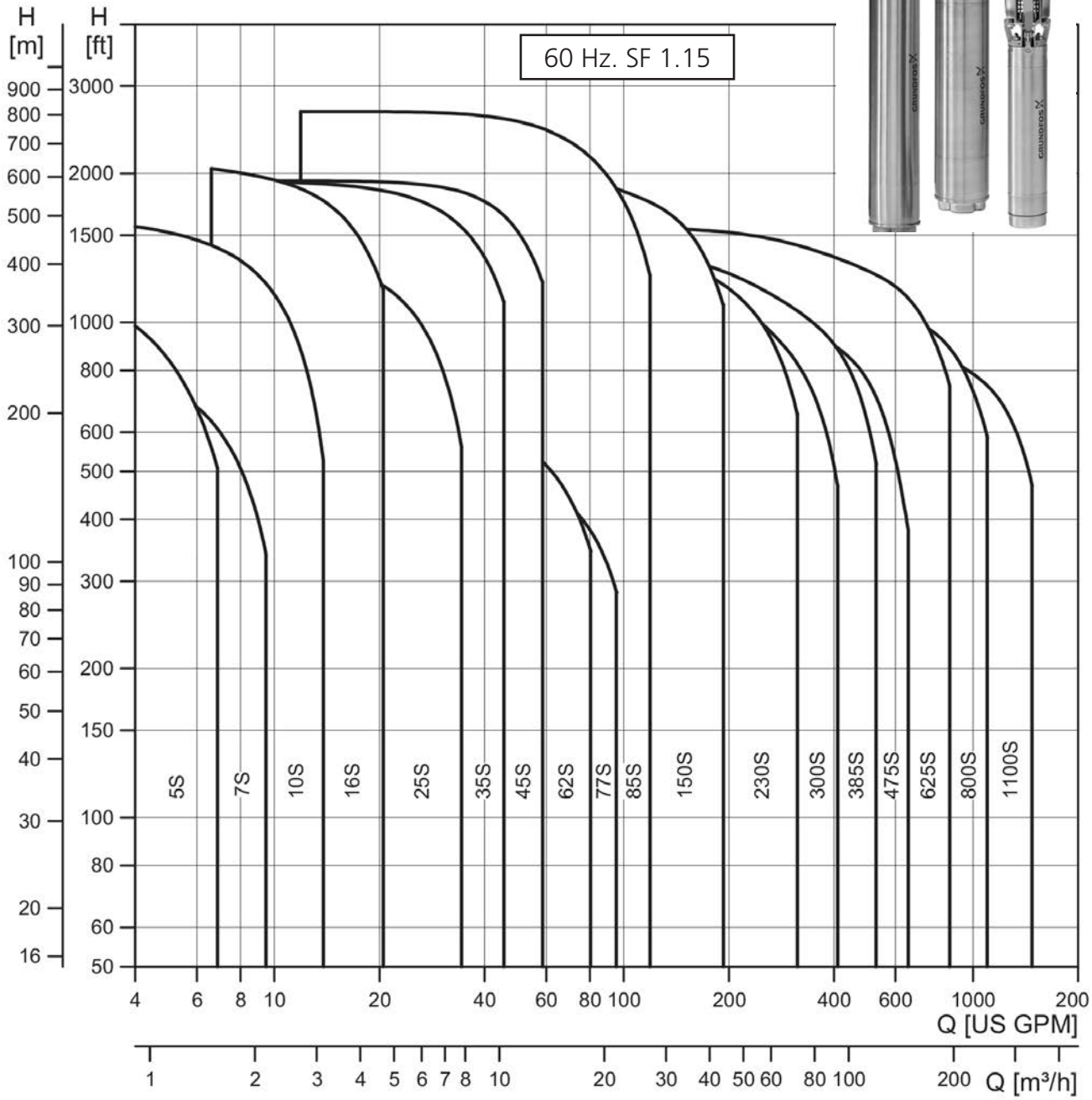
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS SUBMERSIBLE WELL PUMPS — 4" AND LARGER

GRUNDFOS®



Performance range 60 Hz



GRUNDFOS SUBMERSIBLE WELL PUMPS — 4" AND LARGER

Pump range

Type		5S	10S	16S	25S	35S	45S	62S	77S	85S	150S	230S	300S	385S	475S	625S	800S	1100S
AISI 304 stainless steel		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AISI 316 stainless steel				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
AISI 904L stainless steel					•					•	•	•	•	•	•	•	•	•
Connection ★	NPT	1"	1.25"	1.25"	1.5"	1.5" (2")	2" (2")	2"	2"	(3")	(3")	3" (4")	3" 4"	5"	5"	6"	6"	6"
Flange connection:	Grundfos flange													5"	5"	6"	6"	6"

★ Figures in brackets ( ) indicate connection for pumps with sleeve.

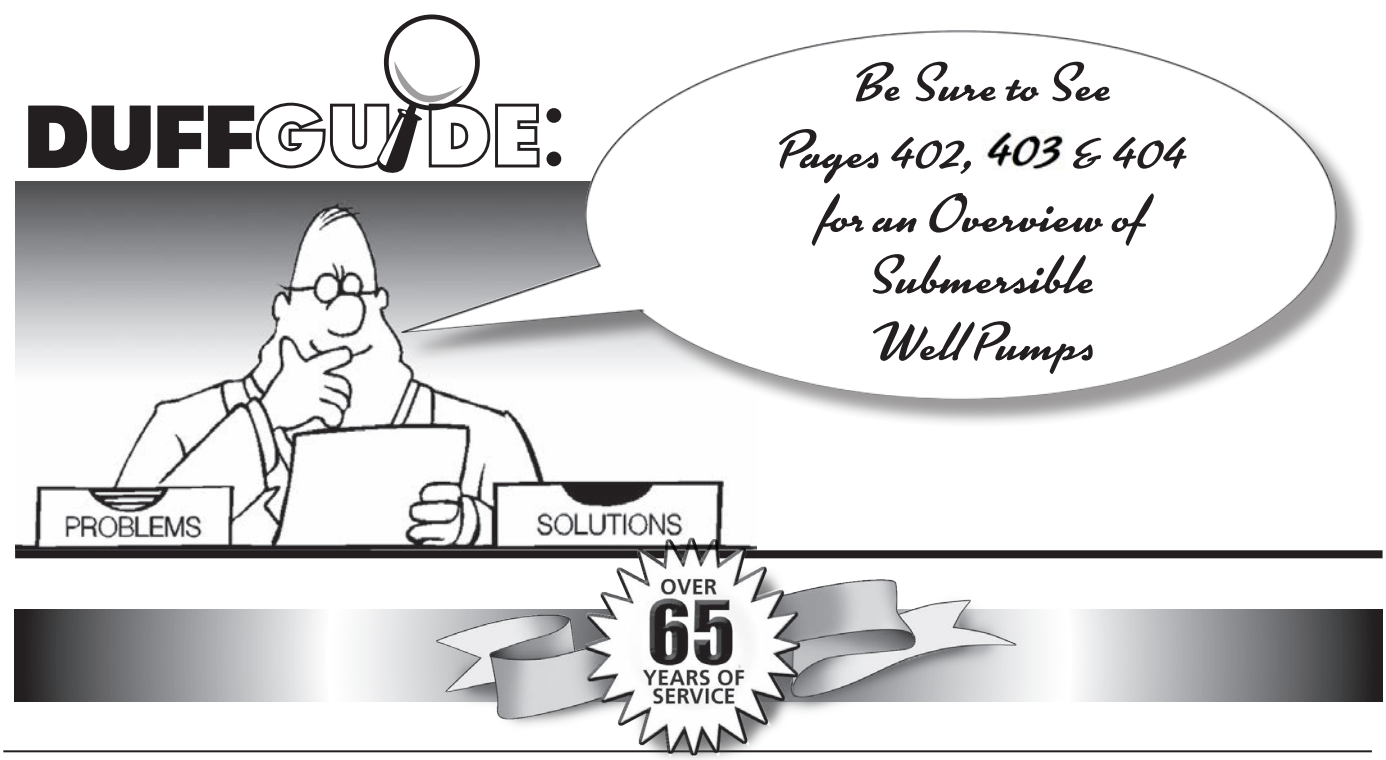
Motor range

Motor output [Hp]	0.5	0.75	1.0	1.5	1.5	3.0	5.0	7.5	10.0	15	20	25	30	40	50	60	75	100	125	150	175	200	250
Single-phase	•	•	•	•	•	•																	
Three-phase	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Industrial motor						•	•	•	•	•	•	•	•										
Rewindable motor							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Steel: AISI 304	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
Steel: AISI 304 and cast iron							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Steel: AISI 316							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Steel: AISI 904L			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
Built-in temperature transmitter in motor			•	•	•	•	•	•	•	•	•	•	•	•									

Direct-on-line starting is recommended up to 100 Hp. Soft starter or autotransformer is recommended above 100 Hp.
Motors with star/delta are available from 7.5 Hp.

Motor protection and controllers

Motor output [Hp]	0.5	0.75	1.0	1.5	1.5	3.0	5.0	7.5	10.0	15	20	25	30	40	50	60	75	100	125	150	175	200	250
MP 204	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Pt100							•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Zinc anode				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vertical flow sleeve	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Horizontal flow sleeve	•	•	•	•	•	•		•	•	•	•	•	•	•									
SA-SPM	•	•	•	•	•	•	•																
GO remote	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
RS-485 communication module	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
G100	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS SQE CONSTANT PRESSURE SYSTEMS



SQE Pump and Motor

The SQE is the only constant pressure pump on the market fully equipped with built-in electronic controls which allow for advanced computer controlled performance and state of the art protection features including sophisticated diagnostics. The motor design is a Variable Speed Drive which electronically changes the pump speed to match demand providing you with the incredible comfort of constant pressure.

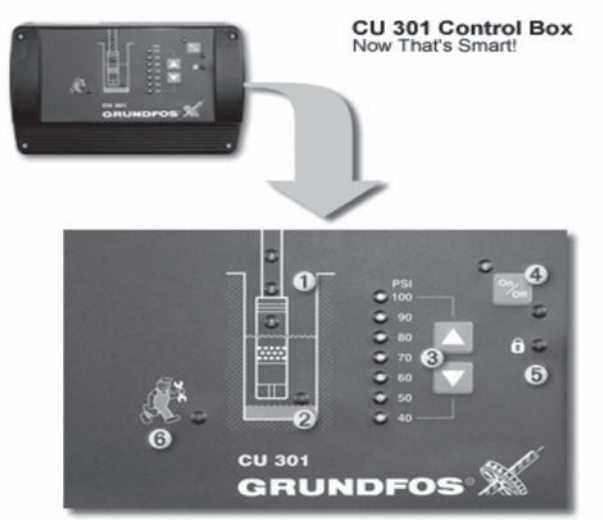
Each unit is equipped with:

- Soft start – prevents water hammer and motor overheating
- Dry run protection – pumps are water lubricated and if your well runs low, an unprotected pump will die
- Overload protection – if a pump cloggs with debris like sand or grass, it can destroy an unprotected motor
- Over and undervoltage protection – the lifetimes of unprotected motors can be greatly reduced by improper voltages. Rural parts of the country are notorious for wide variations in voltage supply

GRUNDFOS®

System Sizing Matrix		
Pump Type Model B	Shutoff Head (0 GPM) @ 3000 RPM Min. Speed	Head @ Rated GPM @ 10700 RPM Max. Speed
	TDH(Feet)	TDH(Feet)
5SQE-90	12	104
5SQE-140	18	161
5SQE-180	24	218
5SQE-230	31	275
5SQE-270	37	332
5SQE-320	43	389
5SQE-360	49	446
5SQE-410	55	503
5SQE-450	61	560
10SQE-110	12	102
10SQE-160	17	158
10SQE-200	23	214
10SQE-240	29	270
10SQE-290	34	326
10SQE-330	40	382
15SQE-70	10	80
15SQE-110	14	121
15SQE-150	19	161
15SQE-180	24	202
15SQE-220	29	242
15SQE-250	33	283
15SQE-290	38	323
22SQE-40	5	35
22SQE-80	9	75
22SQE-120	14	115
22SQE-160	18	155
22SQE-190	23	195
22SQE-220	27	235
30SQE-40	5	31
30SQE-90	11	78
30SQE-130	16	125

GRUNDFOS SQE CONSTANT PRESSURE SYSTEMS



CU 301 User Interface

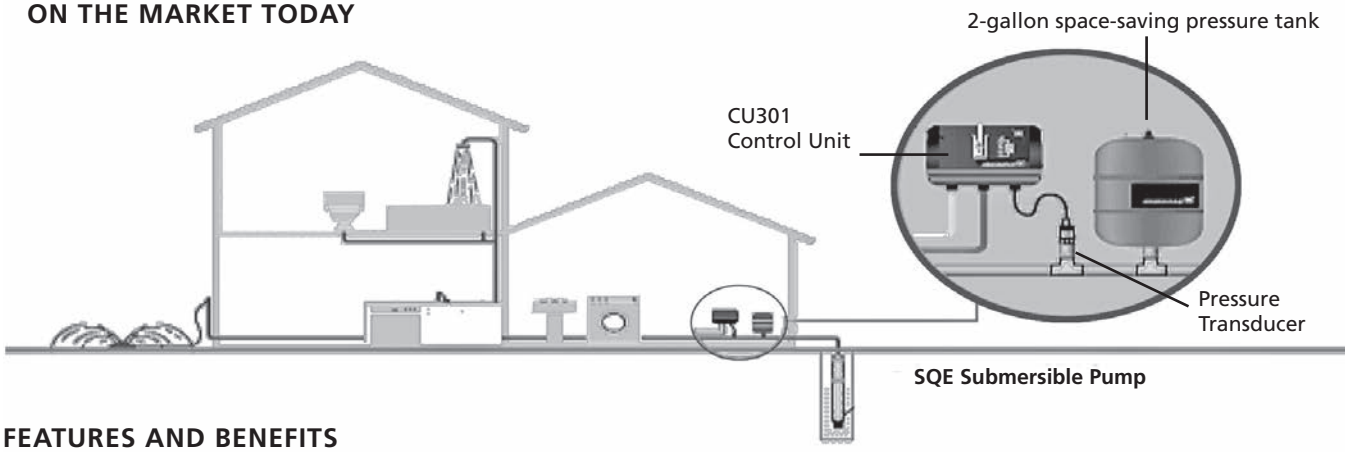
The CU301 is the easy-to-use command & control computer for operating the pump in constant pressure mode. The user simply chooses desired water pressure by pressing the UP or DOWN arrows — and the CU301 does the rest!
The included pressure sensor precisely measures water pressure, sending its signal to the CU301. The CU301 reads this pressure signal and then electronically commands the pump to start, stop, speed up, or slow down in order to maintain constant pressure ... regardless of water demand. It controls the pump via power line communications by impressing high speed data messages on the pump's power supp ly cable. This technology is similar to that used in a home intercom or a baby monitor.

Available Sizes:

- Flow rates: 5, 10, 15, 22 and 30 GPM
- Head up to 450 feet @ 5 GPM
- 115VAC and 230VAC models – all single phase

THE EASIEST AND MOST COMPLETE CONSTANT PRESSURE SYSTEM ON THE MARKET TODAY

The SmartPro™ SQE Constant Pressure System maintains constant pressure regardless of water consumption.



FEATURES AND BENEFITS

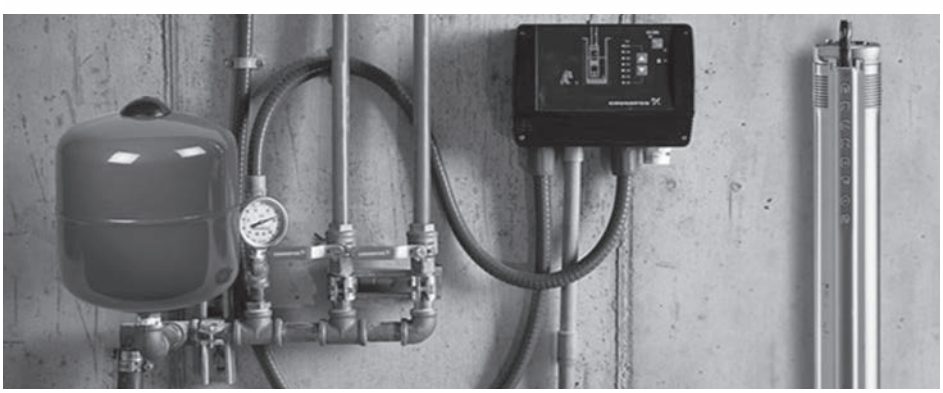
SOFT START to prevent water hammering and electrical stress on service mains.

HIGH STARTING TORQUE even at low supply voltage, the SQE delivers reliable water supply.

OVERLOAD PROTECTION protects the motor against unstable voltage supply by reducing speed or stopping the pump.

DRY RUNNING PROTECTION stops and prevents the pump from damage in case of dry running.

AUTOMATIC RESTART ensures a reliable water supply whenever possible.



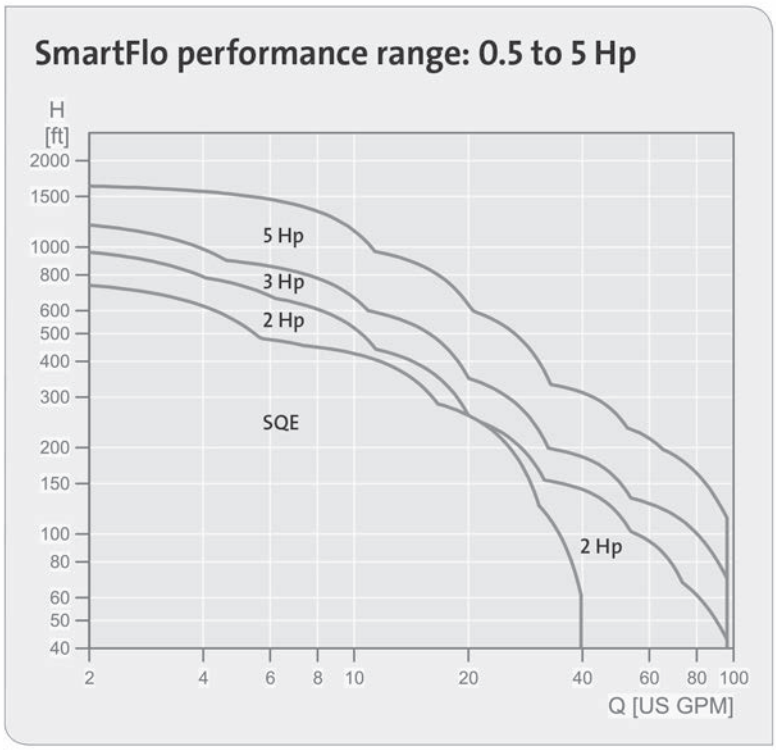
GRUNDFOS®

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS SmartFlo™ System

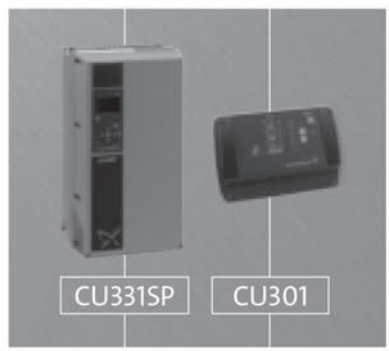
Constant pressure with SmartFlo™

The Grundfos range of SmartFlo systems are complete packages, from a single supplier, designed to provide constant water pressure in any home, irrigation or small commercial application. The SmartFlo system will constantly adapt pump performance to meet the demand for water. Even if every member of a household is using water at the same time – in the shower, in the kitchen, to wash the car, and to irrigate the lawn – the SmartFlo system makes sure that the water pressure remains constant.

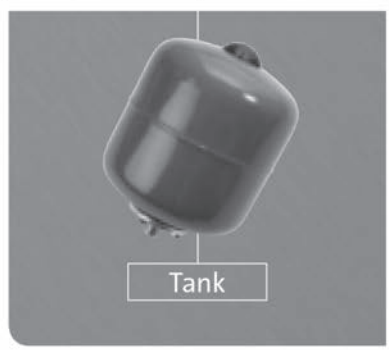


The SmartFlo range comprises systems based around an SQE pump (available in four sizes: 0.5, 0.75, 1, and 1.5 Hp) or an SP pump (2, 3 or 5Hp). The choice of pump size means that you can get constant pressure the SmartFlo way for everything from small single-family homes, to larger homes with extensive irrigation, to small commercial applications. See the performance curve above for details.









DUFF
SELLS SOLUTIONS
Call us today!
610-275-4453

GRUNDFOS CONSTANT PRESSURE SYSTEMS

GRUNDFOS



SmartFlo SQE/CU301

For 3" or larger wells – 0.5 to 1.5 HP

Main Application:

Domestic water supply, irrigation, pressure boosting, water transfer

Features:

- Soft start – prevents water hammering and electrical stress on service mains
- High starting torque – even at low supply voltage, the SQE delivers a reliable water supply
- Over/under voltage protection – protects the motor against unstable voltage supply by reducing speed or stopping the pump.
- Dry running protection – stops and protects the pump from damage

SmartFlo SP/CU331SP

For 4" or larger wells – 2, 3 or 5HP

Main Application:

Domestic & light commercial water supply, irrigation, livestock watering, water transfer

Features:

- Easy setup – simply run the Start-up Wizard and choose pressure setpoint. The system determines the direction of rotation and sets the dry-run function according to the pump.
- System design approach – the CU331SP works with any combination of matched pump and motor.
  - CU331SP works with 2, 3 or 5Hp submersible pumps to fulfill your constant pressure requirements
  - Matched pump & motor – 2HP pump on 2HP motor, 3HP pump on 3HP motor, 5HP pump on 5HP motor
  - Built-in protection features – Soft start, dry run, overload, over/under voltage, sensor alarm, alarm relay and run relay
- Wide voltage range – input: single phase 208 - 240VAC output: 3-phase 208-240VAC
- Indoor or outdoor enclosure options: IP55/Type 12 or IP66/Type 4X

Pump reliability is ensured through:

THE SMARTFLO SYSTEMS IN BRIEF

- Constant water pressure from 40 to 100 psi
- Complete systems
- Pump sizes from 0.5 to 5 Hp
- Rated flows up to 75 gpm
- Small tank – 2 or 4 gal. min.
- Reliable performance
- Easy installation
- Compact design
- UL Approved

PUMP RELIABILITY IS ENSURED THROUGH:

Soft start

No electrical stress on service mains – no in-rush current extends motor life.

Overload, Over/under voltage protection

Pump motors are protected against irregular voltages or excessive currents – the protection feature reduces speed or stops the pump as necessary.

Dry-running protection

Pumps are stopped to prevent damage in case of dry running.

Durable design

The SQE and SP products are designed for a long and trouble-free lifetime

GRUNDFOS SQFLEX - SOLAR-POWERED WELL PUMPS



Overview

The SQFlex family is an environmentally-friendly water supply system. SQFlex pumps are fitted with a permanent magnet motor which enables the efficient use of energy from a wide range of supply options. The pump system offers the perfect water supply solution in remote areas where water is scarce and the power supply is non-existent or unreliable.

Very flexible as to its energy supply and performance, the SQFlex system can be combined and adapted to any need according to the conditions on the installation site. A battery backup system can store the extra energy generated and take over when the primary energy source is not available.

SQFlex is more than just a pump – it's a complete system. Thanks to its built-in electronics, the pump is compatible with both DC and AC power supply without requiring an external inverter.

The complete range consists of eleven different pump sizes: Five helical rotor pumps for applications where a high head is required, and six centrifugal pumps for applications where a greater flow rate is necessary.

Applications

Being designed for continuous, as well as intermittent operation, the SQFlex system is especially suitable for water supply applications in remote locations, such as farms, conservation areas, villages, schools, hospitals.

Features & Benefits

- Renewable energy supply: solar panels or wind turbines
- Built-in electronics, easy installation
- Reliable water supply
- Low operating costs
- Dry-running protection
- Built-in motor protection
- High Efficiency
- Maximum Power Point Tracking (MPPT)
- Wide voltage range
- Built-in sand shield



Eleven different pump models cover a wide range of heads and flows to allow pumping at extended depths (820 ft) or at high flow rates (80 gal/min) or anywhere in between, depending on your requirements.

PUMP MODEL	PUMP TYPE	MAX HEAD	MAX FLOW
3 SQF-2	Helical Rotor	395 ft	3 gal/min
3 SQF-3	Helical Rotor	655 ft	3 gal/min
6 SQF-2	Helical Rotor	395 ft	6 gal/min
6 SQF-3	Helical Rotor	820 ft	6 gal/min
11 SQF-2	Helical Rotor	395 ft	13 gal/min
16 SQF-10	Centrifugal	230 ft	22 gal/min
25 SQF-3	Centrifugal	50 ft	40 gal/min
25 SQF-7	Centrifugal	185 ft	40 gal/min
40 SQF-3	Centrifugal	50 ft	70 gal/min
40 SQF-5	Centrifugal	100 ft	70 gal/min
60 SQF-3	Centrifugal	50 ft	80 gal/min

SQFlex Solar

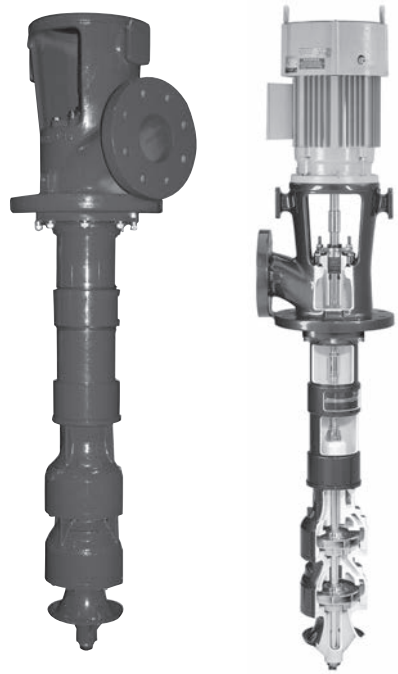
Ideal for most pumping systems, SQFlex Solar provides a reliable supply of water whenever the sun shines. Extremely simple to operate with no moving parts and no maintenance - just clean the panels periodically.





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PEERLESS PUMPS VERTICAL TURBINE PUMPS



The well-known Peerless brand of Grundfos products is based on more than 90 years of experience.

Duff offers a complete range of Vertical Turbine pumps from Peerless Pump, with unrivalled reliability and engineered technology to match your every need.

From standard, off-the-shelf products to custom engineered projects, we have the solution to meet your needs. Our robust line of standard products has a proven history in a variety of demanding applications, and more importantly available when you need them. These products are adaptable to meet specific demands, and our variants offer flexible solutions that are made-to-order.

We partner with Peerless Pump to arrive at engineered solutions that meet today's water and energy challenges. Bringing our expertise, we offer a unique collaborative partnership that extends through the entire product, project, sales and delivery experience.

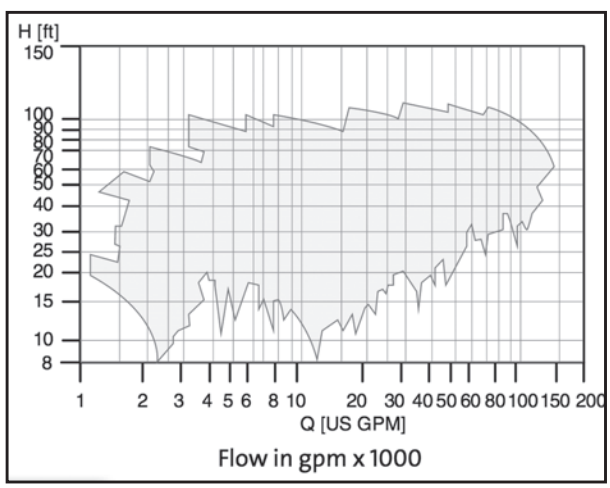
FEATURES & BENEFITS

Peerless Pump pioneered and patented the 'double seal' lateral seal feature to provide increased pump efficiency and extended pump life with focus on the critical surfaces between bowls and impellers.

Peerless Pump is the only manufacturer on the market that utilizes dual bowl bearings to provide extended pump life, utilizing rubber and bronze bearings to protect shaft and impellers against wear in a wide range of operating services.

Wide range of hydraulic and mechanical coverage; offered in numerous material and design configurations – to suit your needs.

Configuration options allow for custom-engineered construction tailored to suit your requirements while ensuring maximum value, high efficiency and long term pump performance.

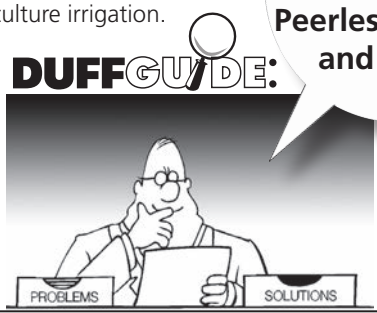


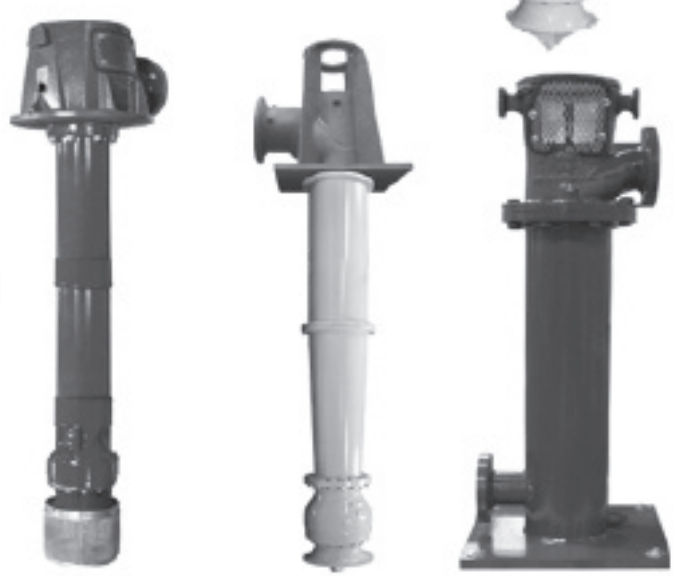


Potable water NSF 372 certified materials to provide clean water supply to the highest standards.

APPLICATIONS

Vertical turbine pumps are used in small, single pump commercial applications to large, multi-pump municipal water supply systems. These pumps are also appropriate for both water transfer, finished water projects, and are widely used in mining and agriculture irrigation.





GRUNDFOS JET PUMPS

The Grundfos JP line of self-priming centrifugal jet pumps is designed for shallow well, deep well, and convertible shallow well pump applications. JP pumps are suitable for pumping clean, non-viscous, non-aggressive, non-explosive liquids, free of solid particles and fibres. JP pumps provide excellent suction capacity.

GRUNDFOS®

Motors are Totally Enclosed and Fan Cooled (TEFC) for quiet operation and superior protection in harsh environments. A full range of motor horsepower are offered from 1/2HP to 3HP. 1/2HP thru 1HP are dual voltage (115/230V) and 1 1/2HP thru 3HP are single voltage (230V).

APPLICATIONS

Grundfos JP pumps are particularly suitable for domestic water supply systems, light agriculture, industrial water transfer, and home and market gardens.

Our most popular Grundfos Jet Pump models:

Fig. No.	Description
113600	GRUNDFOS JP15S-Cast Iron 1-1/2hp Shallow Well
113601	GRUNDFOS JP05D-Cast Iron 1/2hp Deep Well
113603	GRUNDFOS JP4-54 DSA Cast Iron 3/4hp Deep Well
247319	GRUNDFOS JP05S-S/S 1/2hp Shallow Well
248757	GRUNDFOS JP10S-S/S 1hp Shallow Well

FEATURES

- Rugged cast iron or stainless steel
- Technopolymer impeller
- Built-in ejector complete
- Full range of HP's
- Nozzle and Venturi clean out port
- Self-priming and excellent suction lift
  - -- Up to 25 ft depth to water shallow well
  - -- Up to 90 ft depth to water deep well

Because of their durability, these pumps are often used as transfer pumps in farming





DWC SERIES 4" SUBMERSIBLE

DUFF WATER CONDITIONING



DC Series pumps offer superior performance and exceptional resistance to abrasives, due to the floating stack design. An excellent choice for residential and commercial applications.

- Precision machined, cast 304 stainless steel discharge head with a built in check valve and cast rope loop.
- An enclosed urethane bearing, mounted in the polycarbonate top diffuser, offers excellent resistance to abrasives.
- Injection molded polycarbonate diffuser plates offer smoothness and high efficiency with high impact resistance.
- Glass reinforced noryl impellers offer high strength and optimaL abrasion resistance without sacrificing the smoothness.
- The stamped 304 stainless steel bowls are corrosion and abrasive resistant.
- Heavy duty 304 stainless steel, cold drawn, hex shaft, produced to rigid standards of straightness and precise length.
- 304 Stainless steel shaft coupling, secured to the pump shaft provides superior corrosion resistance.
- Thick wall, 304 stainless steel seamless pump housing accurately aligns the entire assembly while eliminating deterioration due to water conditions or electrolysis.
- Precision machined, cast 304 stainless steel motor bracket
- 304 Stainless steel intake screen.
- A 304 stainless steel cable guard protects motor leads from abrasion and cutting.

Product Details
Pump Models 5 to 80 GPM.
Shut off heads up to 1,360 feet.
HP range: 1/2 - 10 HP, 60Hz
DC5 - DC18: 1.25"NPT
DC25: 1.5"NPT
DC35 - CP80: 2"NPT





DUFF gladly accepts VISA & Mastercard

4" SUBMERSIBLE MOTORS

GRUNDFOS®



- MS and MMS submersible motors have been specially developed for the SP pump
- Motors that match the best efficiency point of the pumps
- Motors are all available in stainless steel
- Suitable for use on non-Grundfos branded pumps
- Robust and corrosion resistant
- Long life even in rough conditions
- The canned MS motors are available in 4" and 6" versions; MMS motors available in 8"+ versions.

Grundfos has been manufacturing high-quality submersible motors for more than 30 years, and our submersible motor knowhow is unsurpassed. For reliability, high efficiency and to keep lifecycle costs low, we build the motor to match the pump. The MS and MMS submersible motors are rated among the very best on the market, suitable for use with submersible pumps of any make and are designed to be the perfect fit for the comprehensive range of Grundfos SP pumps – matching their best duty points.



MS 402

- Complete Range of Motors from 1/3 - 2 Hp 1 ph, 2-wire*; 3-wire and 3 Ph
- Designed for 4" and Larger Wells
- Corrosion Resistant Stainless Steel Exterior
- Cast Stainless Steel Machined Top
- Stainless Steel Splined Shaft
- Stator Windings Hermetically Encapsulated in Stainless Steel
- Polyurethane Self Healing Resin
- 900 lb. Thrust Rating
- Water Lubricated
- Internal Water Circulation System Enhances Motor Cooling
- No Cooling Sleeve Needed up to 85°F
- Rated up to 104°F with 1/2 ft./sec. flow Past the Motor
- Filter Check Valve
- Michell Type Carbon/Ceramic Thrust Bearing
- Pressure Equalization Diaphragm
- Sand Slinger
- Bellows Type Shaft-Seal
- Epoxy Coated Bearing Support
- Built-In Surge Protection
- Replaceable Motor Lead
- NEMA Mounting Dimensions
- UL Recognized
- CSA Certified

*2-wire motors are available up to only 1.5 HP



MS 4000

- Complete Range of Motors from 3 - 10 Hp 1 ph, 3-wire and 3 Ph.
- Designed for 4" and Larger Wells
- Corrosion Resistant Stainless Steel Exterior
- Stainless Steel Splined Shaft
- Stator Windings Hermetically Encapsulated in Stainless Steel
- Water Lubricated
- Internal Water Circulation System Enhances Motor Cooling
- No Cooling Sleeve Needed up to 85°F
- Rated up to 104°F with 1/2 ft./sec. flow Past the Motor
- Filter Check Valve
- Michell Type Carbon/Ceramic Thrust Bearing
- 1500 lb. Thrust Rating
- Pressure Equalization Diaphragm
- Sand Slinger
- Tungsten Carbide/Ceramic Shaft-Seal, for Long Life in Sandy Applications
- Steel Bearing Support
- 7 1/2 and 10 Hp Equipped with Tempcon Temperature Sensor
- 3 Ph Motors Work with MTP 75 and CU 3 Motor Protection System
- Replaceable Motor Lead
- NEMA Mounting Dimensions
- CSA Certified
- Available in a 904L Grade Stainless Steel and/or FKM, for Aggressive Applications
- Available In an Industrial Version for Industrial Applications
- Designed for Long Life and Lower operating Costs

*Tempcon optional on 3 and 5HP

6" SUBMERSIBLE MOTORS

GRUNDFOS®



6" Submersible Motors

- MS and MMS submersible motors have been specially developed for the SP pump
- Motors that match the best efficiency point of the pumps
- Motors are all available in stainless steel
- Suitable for use on non-Grundfos branded pumps
- Robust and corrosion resistant
- Long life even in rough conditions
- The canned MS motors are available in 4" and 6" versions; MMS motors available in 8"+ versions.



MMS 6":

- Complete Range of Motors from 7 1/2 - 40 Hp 3 Ph
- Designed for 6" and Larger Wells
- Corrosion Resistant Stainless Steel Exterior
- Stainless Steel Splined Shaft
- Stator Windings Hermetically Encapsulated in Stainless Steel
- Water Lubricated
- Internal Water Circulation System Enhances Motor Cooling
- No Cooling Sleeve Needed up to 85°F
- Rated up to 104°F with 1/2 ft./sec. flow Past the Motor
- Filtered Check Valve
- Michell Type Carbon/Ceramic Thrust Bearing
- 6000 lb. Thrust Rating
- Pressure Equalization Diaphragm
- Sand Slinger
- Tungsten Carbide/Ceramic Shaft-Seal, standard
- Optional Silicon/Carbide Shaft-Seal, for Long Life in Sandy Applications
- Steel Bearing Support
- Equipped With Tempcon Temperature Sensor as Standard
- Work with MTP 75 and CU 3 Motor Protection System
- Replaceable Motor Lead
- NEMA Mounting Dimensions
- CSA Certified Special Construction Features
- Available in a 904L Grade of Stainless Steel and/or FKM, for aggressive Applications
- Available In an Industrial Version for Industrial Applications
- Designed for Long Life and Lower operating Costs.



MMS 8" & 10":

MMS rewindable motors

The Grundfos MMS product range is a complete range of submersible, rewindable motors, available in sizes from 50HP 6" up to 250HP 10" motors. Two material versions are available. A cast iron version EN-JL1040. For more aggressive liquids with a moder-ate content of salt, an N-version made of stainless steel DIN/EN 1.4401 (AISI 316) is available.

Connections and shafts of the 6" and 8" motors are designed according to NEMA standards. The 10" motors are designed according to the drawings shown on page 8. MMS motors comply with the same standards as Grundfos MS moto rs and can therefore be fitted on all Grundfos SP pumps without the need for adapters.

The motor production is in the hands of experts with many years of experience within the manufacture of motors. In order to make the time of delivery as short as possible, components are manufactured for stock, enabling rapid assembly of a few basic components into the finished motor.

The rewindable motor construction means low costs of repair of the motor in case of damage. Moreover, as rewinding can be effected locally, unnecessary time for transportation of the motor can be avoided and possible periods of downtime reduced to a minimum. The construction of the motor, based on few basic components, also facilitates service and repair of the motor.

Fitted with a sturdy MICHELL thrust bearing, which also functions as an upthrust bearing, all motors offer reliable operation.In order to achieve maximum protection of the motor against burnout, all motors can be fitted with a Pt100 sensor. Combined with a relay and an optional Grundfos MP 204 control unit, the Pt100 provides optimum protection of the motor.

Grundfos MMS submersible motors — all stainless steel

Sizes and horspowers from 50hp 6" up to 150hp 8" (3 ph)

Grundfos MMS motor production is in the hands of experts with many years of experience in manufacturing motors. MMS motors feature:

- Mechanical shaft seal
- Silicon carbide/silicon carbide shaft seal standard
- 6" and 8" have standardized NEMA head and shaft
- Protection against upthrust
- High efficiency
- Rewindable motor
- 316SS optional
- Temperature protection with PT100 and MP204
- Michell style thrust bearing
- PE+PA windings standard

Two material versions are available: a cast iron end bell version, and, for more aggressive liquids, an N-version made of AISI 316 stainless steel. Connections and shafts of the 6" and 8" motors are designed according to NEMA standards.

The sturdy Michell style thrust bearing and SIC/SIC shaft seal handles more abrasive applications. The rewindable motor construction means low cost of repair in case of damage.

To achieve maximum protection of the motor from heat, all motors can be fitted with the PT100 sensor. Combined with the Grundfos MP204 control unit, the PT100 provides optimum protection of the motor.





GRUNDFOS®

Monitoring

Motor protection and energy optimization possible with remote monitoring facilities MP 204, SM 100, R100, and G100

Sensor

Temperature protection by means of Pt 100 sensor

Windings

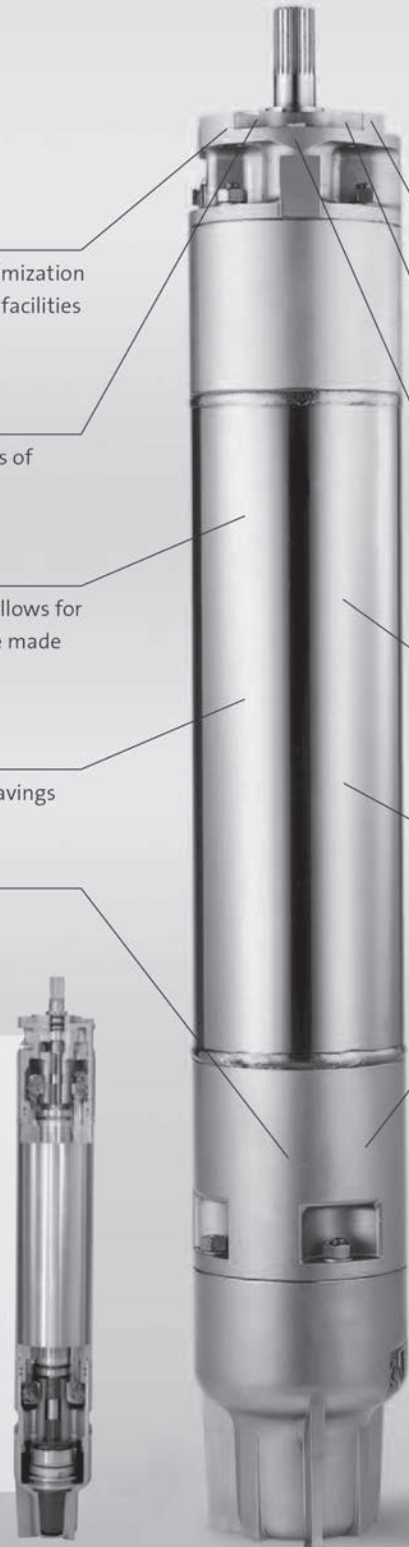
Rewindable motor construction allows for low-cost motor repair that can be made locally

Efficiency

High efficiency provides energy savings

Thrust

High thrust capacity



Cable

Cable approved for drinking water

Ground cable

Inside ground cable standard

Shaft seal

High sand resistance with mechanical shaft seal in SIC/SIC

Warm water

Standard version available with PE2 + PA wire

Contamination

Water filled motor design prevents water contamination

Corrosion

High-grade materials provide high corrosion resistance. Available as standard in AISI 304 stainless steel with cast iron end bells or optional All AISI 316 stainless steel

Grundfos MMS range

50 hp to 150 hp

Life cycle costs

When considering cost of ownership, the motor is just as important as the pump itself. A highly efficient Grundfos submersible motor combined with advanced Grundfos hydraulics offer you the best life cycle costs on the market.

Subject to alterations



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

Franklin Electric

Franklin Electric offers a complete line of submersible motors for groundwater and other submerged pumping applications. Their 4-inch submersible motors (1/3 hp through 15 hp) feature the industry's widest range of voltage and frequency ratings in both single- and three-phase models. For deeper wells and applications requiring higher flow ratings, Franklin's 6-inch and 8-inch submersible motors are available from 5 hp through 200 hp.



Be Sure to See Pages 402, 403 & 404 for an Overview of Submersible Well Pumps



4" Submersible Motors -- Super Stainless

The Franklin 4-inch Super Stainless motor has been the driving force behind residential and light commercial submersible pumps for decades. Designed and patented in 1950 the founder of Franklin Electric, Ed Schaefer, this motor has proven to be the industry's most trusted residential pump motor.

Available in single- and three-phase voltages and various frequencies. "

- Corrosion-resistant stainless steel exterior & splined shaft* Hermetically-sealed windings
- StatorShield™ resin system
- Built-in lightning arrestors (All single-phase; 200 & 300 V three-phase)
- Flow inducer sleeve not required in water up to 86 °F for motors through 2 hp* Two-wire motors are split-phase designs with integral starting components and do not require a control box. "* Three-wire motors through 1 hp use Franklin's exclusive three-wire QD (Quick Disconnect) Control Box with the patented QD Relay

4-Inch Pollution Recovery Motor Specifications

Hz	Ph	Hp Range	kW Range	RPM	Max. Ambient Temp.
60	2-Wire	0.3 - 1.5	0.25 - 1.1	3450	86 °F / 30 °C
50	2-Wire	0.5 - 1.5	0.37 - 1.1	2875	86 °F / 30 °C
60	3-Wire	0.3 - 2	0.25 - 1.5	3450	86 °F / 30 °C
50	3-Wire	0.3 - 2	0.25 - 1.5	2875	86 °F / 30 °C
60	Three-Phase	0.5 - 2	0.37 - 1.5	3450	86 °F / 30 °C
50	Three-Phase	0.5 - 2	0.37 - 1.5	2875	86 °F / 30 °C

* 3 hp motors require 0.25 ft/sec flow past motor.

4-Inch 2-wire Models

HP (kW)	DESCRIPTION W/PH	CONSTRUCTION	VOLTS	HZ	S.F.	LEAD IN MTR	MODEL	DOWNWARD THRUST RATING
⅓ hp 0.25 kW	2-WIRE	WATER WELL	115	60	1.75		244 502 01--S	300 LBS (1500 N)
			115	60	1.75	YES	244 502 90--S	
			230	60	1.75		244 503 01--S	
			230	60	1.75	YES	244 503 90--S	
		POLLUTION RECOVERY	115	60	1.75		244 502 09--S	
			230	60	1.75		244 503 09--S	
½ hp 0.37 kW	2-WIRE	WATER WELL	115	60	1.60		244 504 01--S	300 LBS (1500 N)
			115	60	1.60	YES	244 504 90--S	
			220	50	1.00		244 555 01--S	
			230	60	1.60		244 505 01--S	
			230	60	1.60	YES	244 505 90--S	
		POLLUTION RECOVERY	115	60	1.60		244 504 09--S	
			230	60	1.60		244 505 09--S	
¾ hp 0.55 kW	2-WIRE	WATER WELL	220	50	1.00		244 557 01--S	300 LBS (1500 N)
			230	60	1.50		244 507 01--S	
			230	60	1.50	YES	244 507 90--S	
		POLLUTION RECOVERY	230	60	1.50		244 507 09--S	
1 hp 0.75 kW	2-WIRE	WATER WELL	220	50	1.00		244 558 12--S	650 LBS (3000 N)
			230	60	1.40		244 508 12--S	
			230	60	1.40	YES	244 508 90--S	
		POLLUTION RECOVERY	230	60	1.40		244 508 23--S	
1.5 hp 1.1 kW	2-WIRE	WATER WELL	220	50	1.00		244 359 12--S	650 LBS (3000 N)
			230	60	1.30		244 309 12--S	
			230	60	1.30	YES	244 309 90--S	
		POLLUTION RECOVERY	230	60	1.30		244 309 23--S	

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4-Inch 3-wire Models

HP (KW)	DESCRIPTION						MOTOR MODEL	CONTROL BOX MODEL	DOWNWARD THRUST RATING
	W/PH	CONSTRUCTION	VOLTS	HZ	S.F.	LEAD IN MTR			
⅓ hp 0.25 kW	3-WIRE	WATER WELL	115	60	1.75		214 502 44--S	280 102 49	300 LBS (1500 N)
			115	60	1.75	YES	214 502 90--S	280 102 49	
			220	50	1.00		214 553 41--S	280 353 01	
			230	60	1.75		214 503 44--S	280 103 49	
			230	60	1.75	YES	214 503 90--S	280 103 49	
		POLLUTION RECOVERY	115	60	1.75		214 502 49--S	280 102 49	
			230	60	1.75		214 503 49--S	280 103 49	
½ hp 0.37 kW	3-WIRE	WATER WELL	115	60	1.60		214 504 44--S	280 104 49	300 LBS (1500 N)
			115	60	1.60	YES	214 504 90--S	280 104 49	
			220	50	1.00		214 555 41--S	280 355 01	
			230	60	1.60		214 505 44--S	280 105 49	
			230	60	1.60	YES	214 505 90--S	280 105 49	
		POLLUTION RECOVERY	115	60	1.60		214 504 49--S	280 104 49	
			230	60	1.60		214 505 49--S	280 105 49	
¾ hp 0.55 kW	3-WIRE	WATER WELL	220	50	1.00		214 557 41--S	280 357 01	300 LBS (1500 N)
			230	60	1.50		214 507 44--S	280 107 49	
			230	60	1.50	YES	214 507 90--S	280 107 49	
		POLLUTION RECOVERY	230	60	1.50		214 507 49--S	280 107 49	
		FOUNTAIN DUTY	230	60	1.50	YES	214 507 0600		
1 hp 0.75 kW	3-WIRE	WATER WELL	220	50	1.00		214 558 19--S	280 358 01	650 LBS (3000 N)
			230	60	1.40		214 508 12--S	280 108 49	
			230	60	1.40	YES	214 508 90--S	280 108 49	
		POLLUTION RECOVERY	230	60	1.40		214 508 23--S	280 108 49	
		FOUNTAIN DUTY	230	60	1.40	YES	214 508 0610		
1.5 hp 1.1 kW	3-WIRE	WATER WELL	220	50	1.00		224 350 19--S	282 350 81	650 LBS (3000 N)
			230	60	1.30		224 300 19--S	282 300 81	
			230	60	1.30	YES	224 300 92--S	282 300 81	
		POLLUTION RECOVERY	230	60	1.30		224 300 23--S	282 300 81	
		FOUNTAIN DUTY	230	60	1.30	YES	224 300 0610		
2 hp 1.5 kW	3-WIRE	WATER WELL	220	50	1.00		224 351 19--S	282 351 81	650 LBS (3000 N)
			230	60	1.25		224 301 19--S	282 301 81	
			230	60	1.25	YES	224 301 92--S	282 301 81	
		POLLUTION RECOVERY	230	60	1.25		224 301 23--S	282 301 81	
		FOUNTAIN DUTY	230	60	1.25	YES	224 301 0610		
3 hp 2.2 kW	3-WIRE	WATER WELL	220	50	1.00		224 352 25	282 352 81	900 LBS (4000 N)
			230	60	1.15		224 302 25	282 302 81	
			230	60	1.15	YES	224 302 26	282 302 81	
		FOUNTAIN DUTY	230	60	1.15	YES	224 302 0620		

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4-Inch Three-Phase Models

HP (KW)	DESCRIPTION						MODEL	DOWNWARD THRUST RATING
	W/PH	CONSTRUCTION	VOLTS	HZ	S.F.	LEAD IN MTR		
½ hp 0.37 kW	3-PHASE	WATER WELL	200	60	1.60		234 501 41--S	300 LBS (1500 N)
			200	60	1.60	YES	234 501 92--S	
			220	50	1.00		234 551 41--S	
			230	60	1.60		234 511 41--S	
			230	60	1.60	YES	234 511 92--S	
			380/415	50	1.00		234 561 31--S	
			460	60	1.60		234 521 31--S	
			460	60	1.60	YES	234 521 94--S	
		POLLUTION RECOVERY	200	60	1.60		234 501 49--S	
			230	60	1.60		234 511 49--S	
			460	60	1.60		234 521 49--S	
¾ hp 0.55 kW	3-PHASE	WATER WELL	200	60	1.50		234 502 41--S	300 LBS (1500 N)
			200	60	1.50	YES	234 502 92--S	
			220	50	1.00		234 552 41--S	
			230	60	1.50		234 512 41--S	
			230	60	1.50	YES	234 512 92--S	
			380/415	50	1.00		234 562 31--S	
			460	60	1.50		234 522 31--S	
			460	60	1.50	YES	234 522 94--S	
		POLLUTION RECOVERY	200	60	1.50		234 502 49--S	
			230	60	1.50		234 512 49--S	
			460	60	1.50		234 522 49--S	
		FOUNTAIN DUTY	230	60	1.50	YES	234 512 0600	
			460	60	1.50	YES	234 522 0600	
1 hp 0.75 kW	3-PHASE	WATER WELL	200	60	1.40		234 503 19--S	650 LBS (3000 N)
			200	60	1.40	YES	234 503 92--S	
			220	50	1.00		234 553 41--S	
			230	60	1.40		234 513 19--S	
			230	60	1.40	YES	234 513 92--S	
			380/415	50	1.00		234 563 31--S	
			460	60	1.40		234 523 16--S	
			460	60	1.40	YES	234 523 94--S	
		POLLUTION RECOVERY	200	60	1.40		234 503 23--S	
			230	60	1.40		234 513 23--S	
			460	60	1.40		234 523 23--S	
		FOUNTAIN DUTY	230	60	1.40	YES	234 513 0610	
			460	60	1.40	YES	234 523 0610	

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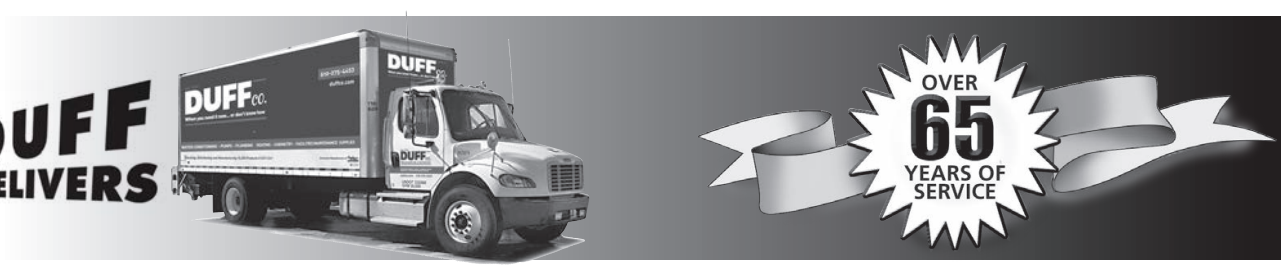
4" Submersible Motors -- High Thrust (5+ hp)

The Franklin Electric 4" submersible motors we stock above 5 to 10 hp are all in the "High Thrust Water Well" series. Motors are also available with Sand Fighter Construction, which is perfect for sandy conditions, including a special sealing system with silicon carbide mechanical shaft seal and special warranty against sand entry failure.

- Corrosion-resistant stainless steel exterior & splined shaft
- Hermetically-sealed windings
- StatorShield™ resin system
- Built-in lightning arrestors (All single-phase; 200 & 300 V three-phase)"
- Flow inducer sleeve not required in water up to 86 °F for motors through 2 hp
- Two-wire motors are split-phase designs with integral starting components and do not require a control box.
- Three-wire motors through 1 hp use Franklin's exclusive three-wire QD (Quick Disconnect) Control Box with the patented QD Relay

4-Inch High Thrust Models

HP (KW)	DESCRIPTION						MODEL	DOWNWARD THRUST RATING
	CONSTRUCTION	PH	VOLTS	HZ	S.F.	LEAD IN MTR		
5 hp 3.7 kW	WATER WELL	1P	220	50	1.00		224 353 8600	1500 LBS (6500 N)
		1P	230	60	1.15		224 303 8600	
		1P	230	60	1.15	YES	224 303 8602	
		3P	200	60	1.15		234 307 8600	
		3P	200	60	1.15	YES	234 307 8602	
		3P	220	50	1.00		234 357 8600	
		3P	230	60	1.15		234 317 8600	
		3P	230	60	1.15	YES	234 317 8602	
		3P	380	60	1.15		234 347 8600	
		3P	380	60	1.15	YES	234 347 8602	
		3P	460/380	60/50	1.15/1.00		234 327 8600	
		3P	460/380	60/50	1.15/1.00	YES	234 327 8602	
		3P	575	60	1.15		234 337 8600	
		3P	575	60	1.15	YES	234 337 8602	
	SAND FIGHTER	1P	230	60	1.15	YES	224 303 8802	
		3P	200	60	1.15	YES	234 307 8802	
		3P	230	60	1.15	YES	234 317 8802	
		3P	460/380	60/50	1.15/1.00	YES	234 327 8802	
		3P	575	60	1.15	YES	234 337 8802	
		3P	380	60	1.15	YES	234 347 8802	
5.5 hp 4 kW	WATER WELL	3P	460/380	60/50	1.15/1.00		234 397 8600	1500 LBS (6500 N)
		3P	460/380	60/50	1.15/1.00	YES	234 397 8602	



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

Franklin Electric

4-Inch Three-Phase Models

HP (KW)	W/PH	CONSTRUCTION	VOLTS	HZ	S.F.	LEAD IN MTR	MODEL	DOWNWARD THRUST RATING
1.5 hp 1.1 kW	3-PHASE	WATER WELL	200	60	1.30		234 504 19--S	650 LBS (3000 N)
			200	60	1.30	YES	234 504 92--S	
			220	50	1.00		234 554 19--S	
			230	60	1.30		234 514 19--S	
			230	60	1.30	YES	234 514 92--S	
			460/380	60/50	1.30/1.00		234 524 16--S	
			460/380	60/50	1.30/1.00	YES	234 524 94--S	
			575	60	1.30		234 534 16--S	
			575	60	1.30	YES	234 534 94--S	
		POLLUTION RECOVERY	200	60	1.30		234 504 23--S	
			230	60	1.30		234 514 23--S	
			460/380	60/50	1.30/1.00		234 524 23--S	
		FOUNTAIN DUTY	230	60	1.30	YES	234 514 0610	
			460/380	60	1.30/1.00	YES	234 524 0610	
2 hp 1.5 kW	3-PHASE	WATER WELL	200	60	1.25		234 305 16--S	650 LBS (3000 N)
			200	60	1.25	YES	234 305 92--S	
			220	50	1.00		234 355 19--S	
			230	60	1.25		234 315 16--S	
			230	60	1.25	YES	234 315 92--S	
			460/380	60/50	1.25/1.00		234 325 16--S	
			460/380	60/50	1.25/1.00	YES	234 325 94--S	
			575	60	1.25		234 335 16--S	
			575	60	1.25	YES	234 335 94--S	
		POLLUTION RECOVERY	200	60	1.25		234 305 23--S	
			230	60	1.25		234 315 23--S	
			460/380	60/50	1.25/1.00		234 325 23--S	
		FOUNTAIN DUTY	230	60	1.25	YES	234 315 0610	
			460/380	60	1.25/1.00	YES	234 325 0610	
3 hp 2.2 kW	3-PHASE	WATER WELL	200	60	1.15		234 306 25--S	900 LBS (4000 N)
			200	60	1.15	YES	234 306 26--S	
			220	50	1.00		234 356 25--S	
			230	60	1.15		234 316 25--S	
			230	60	1.15	YES	234 316 26--S	
			380	60	1.15		234 346 25--S	
			380	60	1.15	YES	234 346 26--S	
			460/380	60/50	1.15/1.00		234 326 25--S	
			460/380	60/50	1.15/1.00	YES	234 326 26--S	
			575	60	1.15		234 336 25--S	
			575	60	1.15	YES	234 336 26--S	
		FOUNTAIN DUTY	230	60	1.15	YES	234 316 0620	
			460/380	60	1.15/1.00	YES	234 326 0620	

FRANKLIN ELECTRIC SUBMERSIBLE MOTORS

Franklin Electric offers a complete line of submersible motors for groundwater and other submerged pumping applications. Their 4-inch submersible motors (1/3 hp through 15 hp) feature the industry's widest range of voltage and frequency ratings in both single- and three-phase models. For deeper wells and applications requiring higher flow ratings, Franklin's 6-inch and 8-inch submersible motors are available from 5 hp through 200 hp.



6" & 8" Submersible Motors

These motors are built for dependable operation in 6" diameter or larger water wells.

- Double flanged NEMA mounting design
- Stainless steel splined shaft
- StatorShield: Franklin's six feature encapsulated system
- Field-replaceable lead with Franklin's WaterBloc technology
- External sand slinger on shaft
- All models variable frequency drive (VFD) approved
- Single-phase models must be used with Franklin control box

Special Options Available:

- SandFighter (seals out sand, other abrasives)
- 316 Stainless Steel construction (includes SandFighter features)
- SubMonitor electronic motor overload: Mounts above ground panel (no additional wiring to motor!)

All motors also available in special "Hi-Temp 90" series, able to operate in water ambients up to 194F (90C).

Call for 6" and 8" motors in stock. Duff also enjoys special, exclusive access to Franklin Electric's local distribution center, to multiply our stock levels.

FRANKLIN SUBMERSIBLE MOTOR CONTROL BOXES

While designed specifically for Franklin Electric motors, Franklin single-phase controls can be used with any manufacturers' pumps whose voltage and horsepower that match. Controls are an integral part of a submersible motor power system. Rigorous component testing ensures the most robust products in the industry.

*** QUICK DISCONNECT (QD) & CAPACITOR RUN CONTROL (CRC) –** These control boxes are designed for use with Franklin 3-wire single-phase submersible motors through 1 hp.

STANDARD & DELUXE – These control boxes are designed for use with Franklin 3-wire single-phase submersible motors from 1 through 15 hp. Recommended for water systems that use pressure switches, level switches, or other pilot devices. Deluxe boxes (only) contain magnetic line contactors carefully matched to the motor rating, eliminating the need for external line contactors.



Enclosure – S Standard & Deluxe Boxes

- Knockouts: Two 1.31" diameter holes for 1" conduit connection. One 1.75" knockout for 1.25" conduit. One 0.88" knockout for 0.5" conduit connection.
- Terminal Block: six terminals provided for wiring up to AWG 2 wire.





- Smooth running

Franklin Electric

The facts are clear and so are the choices. Franklin Electric's Pumptec family provides the high performance pump protection you need deep down in the well. Designed to monitor motor load and supply voltage and to shut down the pump to prevent damage, Pumptec family products protect your water system investment. Pumptec, QD Pumptec, and Pumptec-Plus are the only single-phase load monitoring devices designed specifically for Franklin single-phase motors. They cover a broad range of ratings and fault conditions:

PUMPTEC CONTROL BOXES

	QD PUMPTEC	PUMPTEC	PUMPTEC-PLUS
Air or Gas Locked Pump (Cavitation)	•	•	•
Broken Shaft or Coupling	•	•	•
Clogged Well Screen	•	•	•
Drop in Water Level	•	•	•
Faulty Check Valve		•	•
High Voltage	•	•	•
Low Voltage	•	•	•
Low Yield Wells	•	•	•
Rapid Cycling		•	•
Water Logged Tanks		•	•
Worn Pump Parts	•	•	•

QD PUMPTEC



For Franklin QD Control Boxes. Exclusively designed for Franklin QD Relay Control Boxes, QD Pumptec is a solid state sensing device that monitors motor load and incoming power to automatically shut off a Franklin single-phase, 3-wire motor when related fault conditions are detected. QD Pumptec protects the life of your 4-inch pump and reduces the odds that you will ever have to see the motor again. QD Pumptec allows the user to choose the standard factory calibration for underload or to calibrate to a particular system. Control knobs make it easy to adjust sensitivity and time-out settings. QD Pumptec easily plugs into 3-wire QD Relay Control Boxes in minutes, without additional wiring or tools.



PUMPTEC

For 2- & 3-wire single-phase motors, 1/3 to 1.5 hp. Pumptec is a microcomputer-based pump protection device. It monitors motor load and power line conditions to provide protection against dry well conditions, waterlogged tanks, and abnormal line voltage conditions. Pumptec interrupts power to the motor whenever the load drops quickly or below a preset level. Indicator lights on the cover provide complete system status.

Additional features:
- Easily Adjustable Sensitivity Settings
- Run and Fault Indicator Lights
- Heavy Duty Relay
- Alarm Circuit Contacts
- UL/CSA Listed



PUMPTEC-PLUS

For installations up to 5 hp. The Pumptec-Plus solid state pump protection system is designed for 1/2 to 5 hp single-phase submersible pump motors. Pumptec-Plus protects against a variety of fault conditions. Run and fault lights on the cover make diagnosis quick and easy. Push button Snap Shot™ calibration makes Pumptec-Plus simple to install and an effective troubleshooting tool.

Additional features:
- Push Button Calibration
- Run and Fault Indicator Lights
- Heavy Duty (30A) Contactor
- Works with PSC, Split-phase CSCR and CSIR motors
- UL/CSA Listed

Constant Pressure Controllers

Franklin Electric's constant pressure controllers use state-of-the-art technology to provide constant water pressure through variable speed control of submersible water well pumps.



Benefits:

Built-in Diagnostics & Protecton:
Constant water pressure with a wide range of settings (25 to 80 psi)
Single-phase input power
FE Connect Smartphone app for advanced settings and monitoring (NEMA 3R only excluding SD2W)
User-configurable motor frequency range (NEMA 3R only excluding SD2W)
Easy installation
Soft-start feature prevents water hammer and increases motor life
Works with small pressure tanks or existing larger tanks
Advanced filtering to remove radio frequency interference

Features -- MonoDrive & MonoDriveXT
- Selectable hp rating: Monodrive (1/2, 3/4 and 1 hp), MonodrivexT (1.5 and 2 hp)
- Easy install -- remove the 3-wire control box and install the MonoDrive
- Can retrofit existing systems -- no need to pull the pump
- NEMA 4 & NEMA 1 enclosure
- Single-phase, 3-wire

Built-in Diagnostics & Protecton:
- Surge Protection
- Short circuit
- Underload
- Overheated controller
- Undervoltage
- Broken pipe detection (NEMA 3R only excluding SD2W)
- Locked pump
- User-configurable underload off time (NEMA 3R only excluding SD2W)
- Open circuit
- MonoDrive Models

Features -- SubDrive75, SubDrive100, SubDrive150 & SubDrive300
- Works with standard three-phase submersible motor
- NEMA 4 & NEMA 1 enclosure
- Three-phase performance with single-phase input:
  - High starting torque
  - More efficient
  - Smooth running

SUBMERSIBLE PUMP CABLE

600 VOLT - TWISTED - PVC INSULATION - WITH GROUND

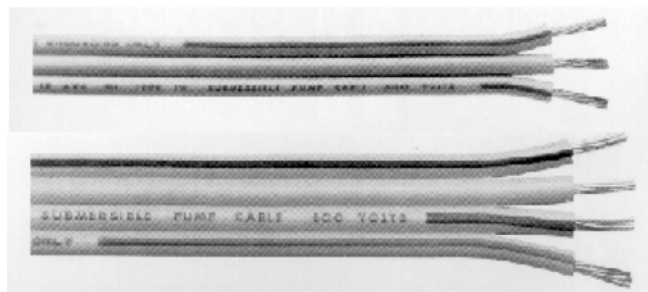
AWG SIZE	FIG. NO.	SHIP WT.
12/2	49731	107
12/3	49735	140
10/2	49732	150
10/3	49736	200
8/2	49733	254
8/3	49739	338
6/3	49729	450
4/3	n/a	627



600 VOLT - FLAT PARALLEL - PVC INSULATION - WITH GROUND

AWG SIZE	FIG. NO.	SHIP WT.
12/2	49741	113
12/3	49742	132

Application: For use within the well casing supplying current to the submersible pump. Maximum conductor operating temperatures of 60^0 C in circuits not exceeding 600 volts.



ELECTRICAL TAPE



3/4"X 60"

FIG. NO.
15332

HEAT SHRINK SPLICE KIT.



SIZE	FIG. NO.
2	10827
3	10829
4	47006

SQUARE D™ by Schneider Electric

PRESSURE SWITCHES AND CONTROL SYSTEMS

PRESSURE SWITCHES

These electric control pressure switches are dependable and sure-acting for all water systems. Easy to install and easy to service, each switch has a removable cover that exposes the entire mechanism and the electrical leads. The contacts are of fine silver, double break type that permit a more efficient flow of current.

SQUARE D FLOAT SWITCHES



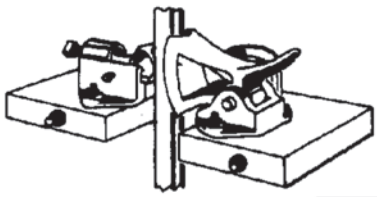
FSG-2	FIG. NO.
20/40	8229
30/50	8254
30/50 P	50216
40/60	45486



GSG-2	FIG. NO.
30/50	8317
40/60	8327
50/70	8347
60/80	8361

PUMP ACCESSORIES

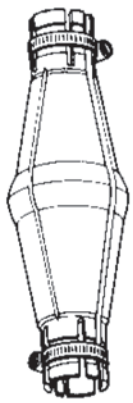
PIPE HOLDER



Holds pipe while it is being lowered or raised in well. Adjusts for 1", 1 1/4", 1 1/2", 2"

FIG. NO.	PRICE
10583	

TORQUE ARRESTOR TA-48



Precision molded from virgin rubber to provide the finest method available for protecting submersible pumps from starting torque damage. Deluxe torque arrestor is field-adjustable to hold pump centered in well, insuring a snug fit in all well casings from 4" - 8" ID. Two piece design installs quickly, eliminates flashing problems, and has a longer life. After easy casing adjustment, the unit is securely fastened to 1" or 1 1/4" drop pipe with the two stainless steel clamps provided.

SPECIAL FEATURE
(Adjustable 4" to 8")

FIG. NO.	PRICE
10801	

CABLE GUARD



4" or 6" wells. Protects pump and cable.

This cable guard will keep the power cable from abrading against the casing or natural side of the well. A minimum of three to five should be used; one at the pump and one between 25' and 30' above the pump. Furnished in 6" size, although cut tabs permit this unique fitting to be used in 4" and 5" wells. This guard is made of polyethylene and will float. Therefore cable ties, retaining clamps or tape should be used over or under the cable guard.

DESCRIPTION	FIG. NO.	PRICE
WG-6 Snap-in	10804	
WG-100 Self Clamping	43465	



SAFETY ROPE



* 1800 LBS
* Bursting Strength
* 1200 ft rolls
* For submersible pumps

DESCR	FIG. NO.	PRICE
FULL COIL	41255	
PER FT	10815	

NO ORDER IS TOO SMALL FOR OUR PROMPT ATTENTION!

SCHRADER AIR VALVE



SIZE	FIG. NO.	PRICE
1/8	10607	
1/4	10608	

RUBBER BLEEDER



For submersible pump. 1" rubber inserts hand-tite in 1" tee.

FIG. NO.	PRICE
20010	

PITLESS ADAPTERS

PITLESS ADAPTERS

Eliminates pit, seals out surface water, easy to service, no digging, easy to install, red brass.

SIZE	FIG. NO.
1"Simmons	18121
1 1/4	10627
2	10637
1 x 1 1/4	10649



IMPORTED BRASS PITLESS ADAPTER



* Red brass unit precision cast
* One unit fits 5"to 7"well casing
* Two neoprene gaskets furnished to protect against outside contamination
* Designed to support up to 900 lbs. of pipe filled with water plus pump
* For 1"drop pipe
* Individually packaged

Tested and meets PAS-1 standards.
All pitless adapters packaged
with two rubber gaskets and lubricant.

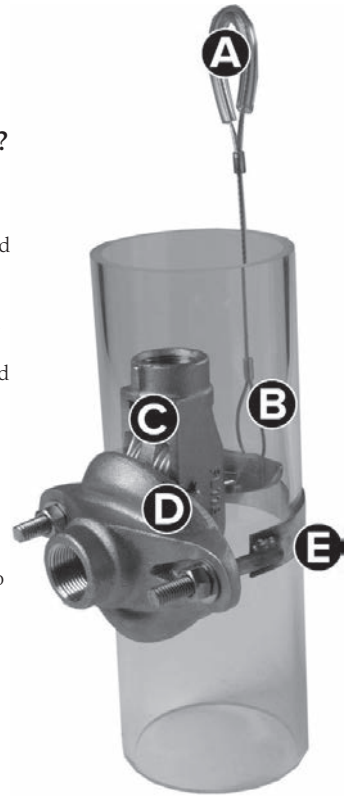
Fig. No.	Material	Size
47964	Brass	1″
77376	Stainless	1″
94924	Stainless	1-1/4″
94925	Stainless	2″



BULLDOG & SNAPPY PITLESS ADAPTERS

Why should you use Monitor® Bulldog and Snappy Pitless Adapters?

- Bulldog and Snappy support 1000 lbs.
- Bulldog and Snappy gaskets and O-rings are significantly larger and seal better
- Bulldog and Snappy are system pressure tested to 250 psi
- Nearly 30% MORE BRASS used in overall construction of Bulldog
- Bulldog hinge pin secured with stainless cotter pin, rather than press fit
- AWC tappings available on Snappy pitless adapter
- Bulldog and Snappy conform to PAS-97(04) code requirements
- Bulldog Pitless contains less than 0.25% lead as required by NSF/ANSI 372



A Finger protection sleeve used on both Bulldog and Snappy pitless adapters
B Pump-setter's leverage on cam is better with Bulldog/Snappy cable point
C Bulldog and Snappy use 2 corrosion-resistant springs
D Bulldog uses a bigger, better cam hinge pin
E Monitor's casing strap distributes pressure more evenly over plastic well casing than U-bolt

FIG. NO.	WELL CASING ID (INCHES)	DROP PIPE SIZE (INCHES)	PRICE
10741	4	1	EACH
10744	4	1 1/4	EACH
63300	4	1	(3 pack)
88520	4	1 1/4	(3 pack)

4 X 1 BULLDOG PITLESS

Same as Snappy, except all brass with larger cam hinge pin

FIG. NO.	PRICE
45140	

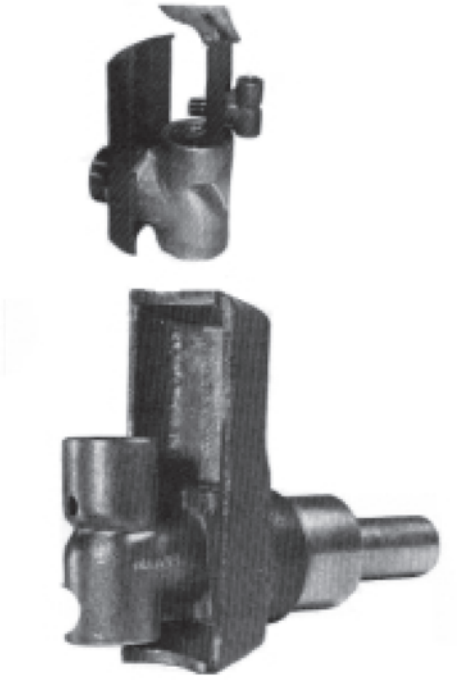


DOMESTIC PITLESS KIT

DQ SERIES FULL PITLESS KITS consist of the double kwikonect discharge body and spool with o-rings . **Cap must be ordered separately.**

FIG. NO.	PRICE
46929	

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.



MAASS MODEL J PITLESSES ARE SANITARY AND EASY TO SERVICE

Recommend to your customers the Maass Model J pitlesses — units create easy well service for you because they are manufactured only of RUST-PROOF materials and designed to eliminate all obstructions in well casing. Pump is easy to pull because of non-rusting components. Water contacts only 304 stainless steel and bronze to COMPLETELY ELIMINATE ANY RUST and/or ELECTROLYSIS. The Maass pitless connection is sealed by using a bronze 8 degree non-locking taper wedge with O-ring forced against 304 non-magnetic stainless steel flanged nipple pressed into steel housing and welded on outer side. Model J Pitless Adapter is non-pressure lifting and is designed for deep wells, higher working pressures, and where plastic pipe is used and high water levels. No lock necessary. Stock only two 1-inch outlet size Maass Model J pitlesses to fit all well casing sizes. Pitless steel housing is permanently installed by welding onto well casing.

MODEL JJ

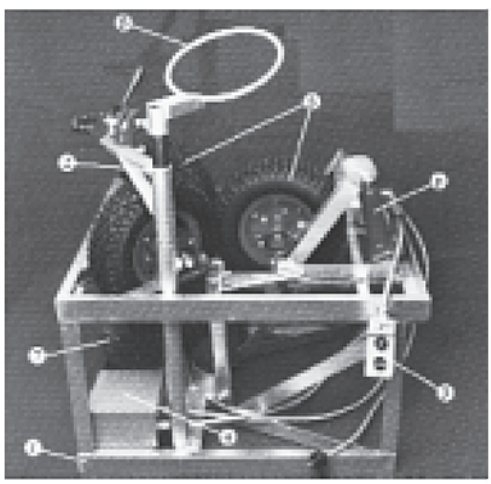
MODEL JJ models below are for suction pumps. Lateral can be pressurized to meet state codes.

WELL CASING SIZE	MODEL	WATER OUTLET & DROP PIPE SIZE
4"-5"	JJ	1" outlet 2" lateral
6"-7"-8"	JJ	1" outlet 2" lateral
4"-5"	JJ	1¼" outlet 2" lateral
6"-7"-8"	JJ	1¼" outlet 2" lateral

WELD-ON UNITS

WELL CASING SIZE	MODEL	WATER OUTLET & DROP PIPE SIZE	APPROXIMATE WEIGHT
4"-5"	J	1"	6#
4"-5"	J	1¼"	7#
4"-5"	J	1½"	8.5#
5"	J	2"	12#
6"-7"-8"	J	1"	6#
6"-7"-8"	J	1¼"	7#
6"-7"-8"	J	1½"	8.5#
6"-7"-8"	J	2"	12#
6"-7"-8"	J	2½"	18#
8"-10"-12"	J	3"	32#
10"-12"	J	4"	50#

UP-Z-DAZY PUMP PULLER



DESCRIPTION	FIG. NO.
Model 30XL aluminum heavy duty (legs incl)	22378
Model 2010 cable with attachment (fits all model 10-20-30 machines)	22379
Wheel kit (fits all model 10-20-30- machines)	22380
Overhead guide	22381
Vise complete with vise arm	22382

WHY A PITLESS UNIT?

The standard above ground "Wall House" or "Well Pit" left much to be desired as solutions to sanitation, convenience and freeze protection.

Monitor (A Division of Baker Manufacturing) developed the first solution to eliminate the "well house and well pit" - with the Pitless Adapter and Pitless System.



The Pitless system allows the water to be directed to the service underground below the frost line, thus preventing any form of surface contamination.

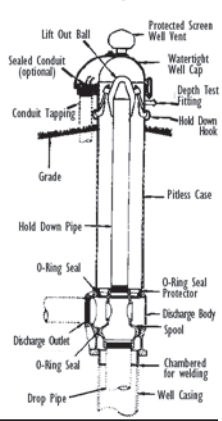


Monitor

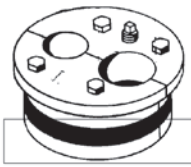
A Division of : BAKER manufacturing company

INDUSTRIAL PITLESS ADAPTER UNITS

STANDARD



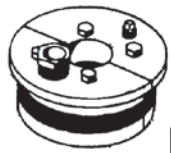
WELL SEALS AND CAPS



DOUBLE HOLE JET PUMP

WELL SIZE	PIPE SIZE	CAST IRON FIG. NO.	CAST IRON PRICE	ABS FIG. NO.	ABS PRICE
4"	1 X 1	35694		-	-
4"	1 1/4X1	10724		42503	
6"	1 1/4X1	10739		28162	
6"	11/4X11/4	19758		-	-
6 1/4"	1 1/4 X 1	35695		-	-
6"	1 X 1	49182		-	-
6"	1 X 3/4	51452		-	-





SINGLE HOLE JET PUMP

WELL SIZE	PIPE SIZE	CAST IRON FIG. NO.	CAST IRON PRICE	ABS FIG. NO.	ABS PRICE
3"	1	36275		-	-
4"	1	10718		28160	
4"	1 1/4	10720		-	-
4"	2	25894		-	-
5 5/8"	1	10730		-	-
5 5/8"	1 1/4	27370		-	-
6"	1	10734		-	-
6"	1 1/4	10737		35697	
6"	2	22181		-	-
6 1/4"	1	25201		-	-
8"	1	25504		-	-
8"	3	25446		-	-

WELL CAPS

PREMIUM WATERTIGHT CAP



A truly watertight cap. The top of the cap can be removed without effecting the seal, conduit or wiring. Painted green and oven-dried.

ID Casing Size	Max Case OD	Conduit Tap Size	Vent Tap Size	FIG. NO.
4"	4.545	1 1/2	1	30005
6"	6.69	1 1/2	1 1/4	25296



TURTLE WATERTIGHT CAP

A two piece cast iron cap that features an O-ring seal on the well. Top of the cap removes for easy well servicing. Standard series cap attaches to steel well casing with three square head bolts. Series cap for PVC casing attaches by solvent welding. Vermin resistant. Painted gree and oven dried.

DESCR	FIG. NO.	PRICE
Plastic	52570	
Cast Iron	63299	



6" CAST IRON WELL CAP

1/4" grounding lug on ring meets national electric code requiring grounding of submersible pump.

Nom Well Size	Casing OD	FIG. NO.	PRICE
6&6	1/4	6-5/8	48536



ALUMINUM/ABS WELL CAP (low profile)

Constructed of injection-molded ABS plastic and aluminum. Cap base can be solvent welded directly to PVC well casing. 6-1/4" PVC.

FIG. NO.
47616



ALUMINUM WELL CAP

1/2" padlock locator holes to maintain well security.

FIG. NO.
23803

MULTI-SIZE SUBMERSIBLE WELL CAP



One size fits 5-5/8", 6", 6 1/4", heavy cast iron construction, Bright red for easy site location. Quick installation. Individually packaged.

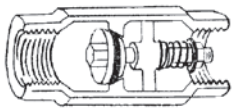
FIG. NO.
10753

For additional information call: 610-275-4453 or Fax: 610-279-6299.

Please call for current prices.

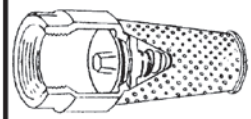
FOOT AND CHECK VALVES

BRASS CHECK VALVE



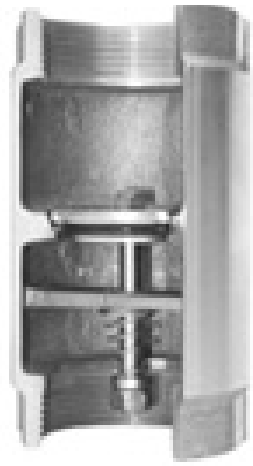
SIZE	FIG. NO.	PRICE
1/2	10474	
3/4	10479	
1	10482	
1 1/4	10485	
1 1/2	10487	
2	10491	
2 1/2	——	
3	10500	
4	10505	

BRASS FOOT VALVE



SIZE	FIG. NO.	PRICE
1/2	——	
3/4	10448	
1	10453	
1 1/4	10455	
1 1/2	10459	
2	10461	
2 1/2		
3	10467	
4	10472	

STAINLESS STEEL 304 LEAD-FREE CHECK VALVES



SIZE	FIG. NO.
1/2″	112451
3/4″	114432
1″	80358
1-1/4″	240544
1-1/2″	105661
2″	101723
3″	92895

BRADY FOOT AND LINE CHECK VALVES



MADE OF ABS PLASTIC

SIZE	FIG. NO.	PRICE
3/4	37652	
1	10677	
1 1/4	10681	
1 1/2	10685	

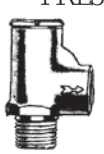
FOOT VALVES

GAVANIZED & STAINLESS FOOT VALVES



CALL DUFF FOR AVAILABLE SIZES

PRESSURE RELIEF VALVE



For pumps ,tanks, etc.
Set at 75 lbs.

SIZE	FIG. NO.
1/2″ - 75#	10617
3/4″ - 75#	10620
1/2″ - 100#	49045
3/4″ - 100#	49046

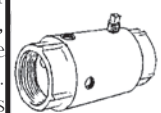




PUMP BYPASS RELIEF VALVE. Recommended for unloading operating on oil, chemical, non-corrosive substances and water lines. Used for pump bypass relief, open tank discharging and pump closing relief. **CAUTION: SHOULD NOT BE USED AS EMERGENCY OR SAFETY RELIEF VALVE.**
Found in the following applications: Water pump bypass, Irrigation, Sprinkler system on golf courses Fountains, Fire protection systems
ADJUSTABLE 25-100 LB

SIZE	FIG. NO.	PRICE
1/2	47308	
3/4	47310	
1	47312	
1 1/4	47314	
1 1/2	47316	
2	47318	
2 1/2	——	
3	47322	

CONTROLLER CHECK VALVE



Eliminates the Tank Tee
With two and four tappings: One for two 1/4" switch and gauge and two 1/8" snifter valve and 18"drain plug.

	TWO HOLE		FOUR HOLE	
SIZE	FIG. NO.	PRICE	FIG. NO.	PRICE
1	10527		10514	
1 1/4	10532		10517	
1 1/2			——	
2				



FLOMATIC ENVIRO CHECK UNLEADED VALVES



MODEL 80E ENVIRO-CHECK

Lead free bronze body
Threaded female x female connection
Non-spin acetal poppet
Stainless steel spring

SIZE	FIG. NO.	PRICE
1/2	8538	
3/4	65317	
1	65208	
1 1/4	65318	
1 1/2	65319	
2	65209	
2 1/2	9133	
3	9134	
4	65320	

UNLEADED ENVIRO-CHECK FLOMATIC VALVES
The first lead-free bronze check valve, developed by Flomatic Corporation in order to protect potable water from lead contamination.

Nominal Chemistry	
Copper (Cu)	88%
Tin (Sn)	3.5%
Lead (Pb)	0%
Zinc (Zn)	7%
Nickel (Ni)	.5%
Bismugh	1%

*Lead free bronze alloy (Federally #1) less than 0.1% lead



MODEL 80BE ENVIRO-CHECK

Same as 80E with two drilled and tapped holes 1/8"inlet side and 1/4"outlet side

SIZE	FIG. NO.	PRICE
1	65210	
1 1/4	9139	
1 1/2	39056	
2	39057	



MODEL 80XBE ENVIRO-CHECK

Same as 80E
With two 1/4"tapped holes on outlet side for pressure switch and gauge

SIZE	FIG. NO.	PRICE
1	65325	



MODEL 80CE ENVIRO-CHECK

Same as 80E
Control center for submersible pump installations with four tappings, one 1/8" inlet side, two 1/4"outlet side and one 1/8"outlet side with brass plug.

SIZE	FIG. NO.	PRICE
1	65321	
1 1/4	9163	
1 1/2	9145	
2	65322	



MODEL 60s BRONZE FOOT

Cast bronze body
Threaded female connection
Features a NITRILE (Buna-N) seal
Acetal/bronze poppet, stainless spring and screen

SIZE	FIG. NO.	PRICE
1/2	8413	
3/4	——	
1	65311	
1 1/4	65312	
1 1/2	65313	
2	65314	
2 1/2	8509	
3	8522	
4	——	



MODEL 100E Bronze In-Line Check Valve
Easy wrenching hex bronze body construction. High strength acetal poppet, stainless steel spring, Buna-N seal. 1".

SIZE	FIG. NO.	PRICE
1"	33004	



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

STAINLESS STEEL INSERT FITTINGS & VALVES

STAINLESS STEEL INSERT FITTINGS

MACHINED FROM 316 ALLOY STAINLESS STEEL PIPE

Round body plastic pipe to mip.
For flexible (polyethelene) plastic pipe.

MALE ADAPTER



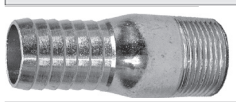
SIZE	FIG. NO.
1/2	50487
3/4	145685
1	48688
1 1/4	234052
1 1/2	57029
2	55722

EXTRA LONG MALE ADAPTER



SIZE	FIG. NO.
1	37862
1 1/4	37863

REDUCING MALE ADAPTER (MPTXINSERT)



SIZE	FIG. NO.
1 1/4 X 1	62983

EXTRA LONG REDUCING MALE ADAPTER (MPTXINSERT)



SIZE	FIG. NO.
1 1/4 X 1	RASS5-4

COUPLING



SIZE	FIG. NO.
1/2"	334793
3/4"	334319
1"	178875
1-1/4"	234052

HEX BUSHING (MPTXFPT)



SIZE	FIG. NO.
1 1/4 X 1	6960





DUFF DIFFERS

WE'LL SHOW YOU HOW.

GALVANIZED & BRASS INSERT FITTINGS

MALE ADAPTER



AVAILABLE IN STAINLESS STEEL

SIZE	GALVANIZED FIG. NO.	GALVANIZED PRICE	BRASS FIG. NO.	BRASS PRICE
1/2	10887		11203	
3/4	10892		11205	
1	10897		11208	
1 1/4	10906		11210	
1 1/2	10917		11212	
2	10923		11214	
2 1/2	-		-	-
3	20023		-	-
4	20024		-	-
6	-		-	-

COUPLING



AVAILABLE IN STAINLESS STEEL

SIZE	GALVANIZED FIG. NO.	GALVANIZED PRICE	BRASS FIG. NO.	BRASS PRICE
1/2	11136		-	
3/4	11139		11217	
1	11140		11218	
1 1/4	11142		11220	
1 1/2	11144		11221	
2	11146		11222	

VENTURI MALE ADAPTER



SIZE	GALVANIZED FIG. NO.	GALVANIZED PRICE	BRASS FIG. NO.	BRASS PRICE
1 X 8	11175		19644	
1 1/4 X 8	11176		-	

Be Sure to See Pages 610 & 611 for Insert Fittings & Poly Pipe



BRASS TEE
Fabricated



SIZE	FIG. NO.	PRICE
3/4	AVAILABLE BY SPECIAL ORDER	
1		
1X3/4		
1 1/4		
1 1/4X1		
1 1/2		

ONE PIECE ELL Brass



SIZE	FIG. NO.	PRICE
3/4	23524	
1	23525	
1 1/4	22462	
1 1/2	-	

FEMALE ADAPTER



SIZE	GALVANIZED FIG. NO.	GALVANIZED PRICE	BRASS FIG. NO.	BRASS PRICE
1/2	11181		-	
3/4	11183		11225	
1	-		11227	
1 1/4	-		11229	
1 1/2	-		11231	
2	-		11232	

EXTRA LONG COUPLING



SIZE	GALVANIZED FIG. NO.	GALVANIZED PRICE	BRASS FIG. NO.	BRASS PRICE
1	35845		33203	

EXTRA LONG ADAPTER



Size	Fig. No.	Price
BRASS		
1	11246	
1 1/4	——	
GALVANIZED		
1	11241	
1 1/4	11243	

CAST ROPE ADAPTER Brass



SIZE	FIG. NO.	PRICE
1	18149	

REDUCING ADAPTER Brass



SIZE	FIG. NO.	PRICE
1 X 3/4	47415	-
1 1/4 X 1	11251	

WELL SEAL ELLS



Insert X Insert

SIZE	GALVANIZED
1	-
1 1/4	-

Insert X Male

SIZE	GALVANIZED
1	-
1 1/4	-

WE'RE WAITING FOR YOUR CALL!
610-275-4453

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

PUMP ACCESSORIES

TYPE ALL PLASTIC DEEP WELL AIR RELEASE

Maintains proper ratio of air to water in submersible water systems. All polyethylene construction, including float, will not corrode - includes gauge port and 0-40 lb. limited bleed adjustment



FIG. NO.	PRICE
32856	

DEEP WELL AIR RELEASE



Maintains proper ratio of air to water in submersible water systems. Deluxe deep well air release features ABS float and cast body which prevents galvanic action and pump tapping.

FIG. NO.	PRICE
10776	

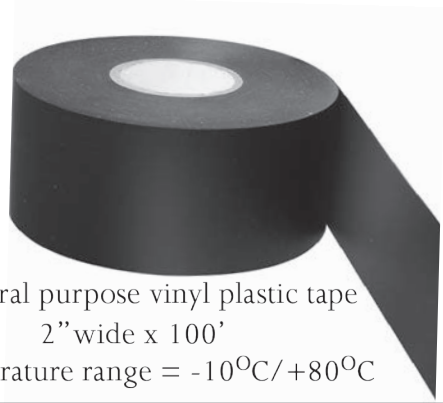
AIR VOLUME CONTROL TYPE

Type "L"
Preserves correct proportion of water and air in shallow well reciprocating pump systems. Includes tubing and fittings.



FIG. NO.	PRICE
10782	

PIPE WRAP TAPE



General purpose vinyl plastic tape
2"wide x 100'
Temperature range = -10°C/+80°C

DESCR	FIG. NO.	PRICE
10 MIL	82344	

PUMP PRESSURE GAUGE



*All brass and bronze movement
*Eliminates sticking and hanging up
*Easier to read
2" Dial 1/4" x 100 lb.

FIG. NO.	PRICE
10610	



TANK CROSSES

No-Lead Brass Long Tank Cross



FIG. NO.	LENGTH	OUTSIDE	INSIDE	TOP	FRONT	P[RICE
10548	10"	1X1X1	3/4"	1/4"	1/2"	

No-Lead Brass Long Tank Cross

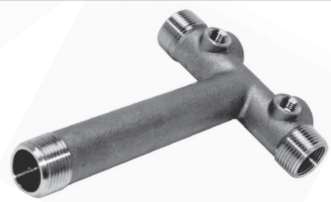


FIG. NO.	LENGTH	OUTSIDE	INSIDE	TOP	FRONT	PRICE
25884	13"	1X1X1	3/4"	1/4"	1/2"	
10561	16"	1 1/4X1 1/4X1 1/4	1"	1/4"	1/2"	

Stainless Steel Tank Tees



Fig. No.	Size
318678	1" X 1" X 3/4" (11" long)
311827	1-1/4" X 1-1/4" X 1" (14" long)

SHORT TANK CROSS

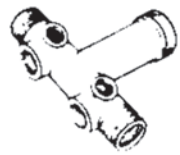


FIG. NO.	SIZE	PRICE
(Brass) 10577	1X3/4X3/4	
(Brass) 33936	1 1/4X1X1	

WELL-X-TROL TANKS ARE AVAILABLE IN SIZES UP TO 528 GALLONS IN VOLUME



CALL FOR ASME-RATED TANKS

PUMP STAND



For vertical mounting of pump on Well-X-Trol models WX201, /WX201,-IN, E\WX-202, WX-202-IN and WX203

FIG. NO.	PRICE
10833	

Vertical mounting of pump on Well-X-Trol models WX-250, WX-251 and WX-252.

FIG. NO.	PRICE
44484	

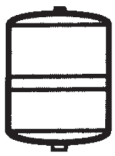
SELECTION TABLE - WELL-X-TROL

OLD-STYLE PRESSURE TANK SIZE (volume in gallons)	WELL-X-TROL MODEL NO.	PRESSURE SWITCH: WELL-X-TROL PRE-CHARGE PUMP CUT-IN PRESSURE	PRESSURE SWITCH: PUMP CUT-OUT PRESSURE
6	WX-101	20 PSI	40 PSI
12	WX-102	20 PSI	40 PSI
20	WX-103	30 PSI	50 PSI
30	WX-200	30 PSI	50 PSI
30	WX-201	30 PSI	50 PSI
42	WX-202	30 PSI	50 PSI
82	WX-203	30 PSI	50 PSI
120	WX-250	30 PSI	50 PSI
225	WX-302	25 PSI	50PSI

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

RESIDENTIAL WELL-X-TROL TANKS

IN-LINE MODELS

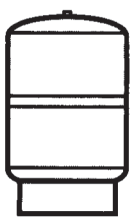


AMTROL INC

MODEL NO.	DIMENSIONS DIA (INS)	DIMENSIONS HEIGHT (INS)	TOTAL VOLUME (GALS)	DRAWDOWN 20/40 (GALS)	DRAWDOWN 30/50 (GALS)	DRAWDOWN 40/60 (GALS)	SHIP WT (VOL LBS (CU FT)	FIG. NO	PRICE
WX-101	8	12 5/8	2.0	.8	.6	.5	5 (0.6)	7764	
WX-102	11	15	4.4	1.6	1.4	1.2	9 (1.2)	7768	
WX-103	11	24 3/4	8.6	3.1	2.7	2.2	15 (2.0)	7771	
WX-104	15 3/8	17 3/8	10.3	3.8	3.2	2.8	20 (2.6)	7774	

Precharge Pressure for WX-101 & WX-102 is 20 PSIG and Sys. Conn. is 3/4" NPTM.
Precharge Pressure for WX-103 is 30 PSIG and Sys. conn. is 3/4" NPTM.
Precharge Pressure for WX-104 and EX-200 is 30 PSIG and Sys.Conn. is 1" NPTM.
Maximum Working Pressure is 100 PSIG and Maximum Working Temperature is 200°F.

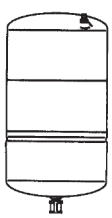
STAND MODELS



AMTROL INC

MODEL NO.	DIMENSIONS DIA (INS)	DIMENSIONS HEIGHT (INS)	TOTAL VOLUME (GALS)	DRAWDOWN 20/40 (GALS)	DRAWDOWN 30/50 (GALS)	DRAWDOWN 40/60 (GALS)	SHIP WT (VOL LBS (CU FT)	FIG. NO	PRICE
WX-201	15 3/8	23 7/8	14.0	5.1	4.3	3.7	27 (3.8)	7781	
WX-202	15 3/8	31 5/8	20.0	7.3	6.2	5.4	35 (4.9)	7784	
WX-203	15 3/8	46 3/8	32.0	-	9.9	8.6	43 (7.0)	7786	
WX-205	22	29 1/2	34.0	12.4	10.5	9.1	61 (9.5)	43262	
WX-250	22	35 5/8	44.0	16.3	13.6	11.9	69 (11.0)	7789	
WX-251	22	46 3/4	62.0	22.9	19.2	16.7	92 (13.9)	46830	
WX-255	22	57	81.0	-	25.0	21.7	103	247525	
WX-302	26	47 3/16	86.0	31.8	6.7	3.2	123 (18.9)	9811	
WX-350	26	61 7/8	119.0	44.0	36.9	32.1	166 (24.5)	30032	
WX-252	22		86.0		26.6	23.0	111	131694	

UNDERGROUND MODELS

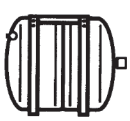


MODEL NO.	DIMENSIONS DIA (INS)	DIMENSIONS HEIGHT (INS)	TOTAL VOLUME (GALS)	DRAWDOWN 20/40 (GALS)	DRAWDOWN 30/50 (GALS)	DRAWDOWN 40/60 (GALS)	SHIP WT (VOL LBS (CU FT)	FIG. NO	PRICE
WX1250-UG	22	33 3/8	44.0	16.3	13.6	11.9	63 (11.0)	59993	
WX-251-UG	22	44 1/2	62.0	22.9	19.2	16.7	83 (13.9)	76587	

Precharge Pressure for Models 200-UG and 202-UG is 30 PSIG ans Sys. conn. is 1" NPTF Coupling.
Precharge Pressure for Models 250-UG and 251-UG is 38 PSIG; Sys. Conn is 1 1/4" NPTF Coupling.
Maxmimum Working Pressure is 100 PSIG and Maximum Working Temperature is 200°F.

AMTROL INC

PUMP STAND MODELS

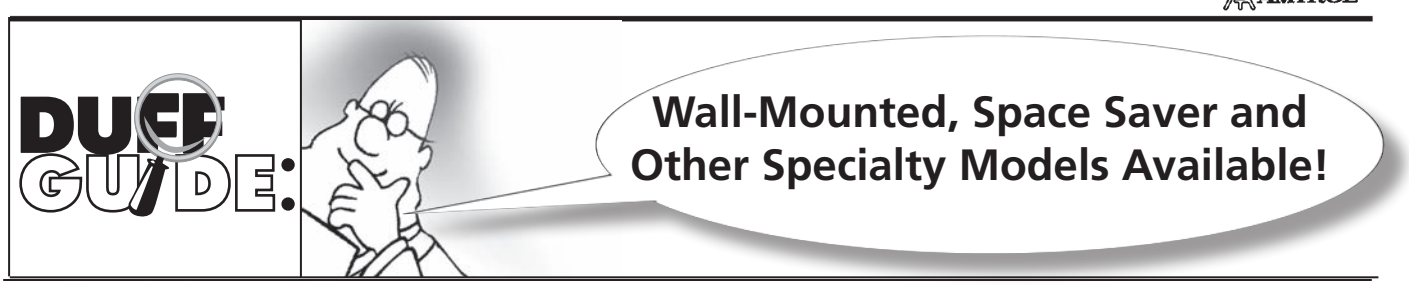


MODEL NO.	DIMENSIONS DIA (INS)	DIMENSIONS HEIGHT (INS)	TOTAL VOLUME (GALS)	DRAWDOWN 20/40 (GALS)	DRAWDOWN 30/50 (GALS)	DRAWDOWN 40/60 (GALS)	SHIP WT (VOL LBS (CU FT)	FIG. NO	PRICE
WX-102-PS	17 1/2	14 1/4	14.0	4.4				16884	
WX-200-PS	17 1/4	15 5/8	14.0	5.2	4.3	3.	29 (4.0)	41013	

Precharge Pressure is 30 PSIG ans Sys. conn. is 1" NPTF Coupling.
Maxmimum Working Pressure is 100 PSIG and Maximum Working Temperature is 200°F.

Many other pump stand models available

AMTROL INC



AMTROL

7 Year Warranty
- Installers asked for it - we delivered.
- A Well-X-Trol exclusive and the best warranty in the industry.

High Strength Steel
- Deep-drawn domes are double the strength of rolled steel.

Multi-Dome Construction
- Provides internal bracing for added strength.
- Prevents diaphragm over-extension.

Heavy Duty Butyl Diaphragm
- The industry's thickest diaphragm provides extra strength and flexibility.
- Seamless design conforms exactly to the shell without stretching, creasing or forming bubbles that could trap water or sediment.
- Meets stringent FDA requirements.

Positive Diaphragm Seal
- Unique hoop ring and groove design secures the diaphragm, liner and shell for added strength and reliability.
- Exclusive welding process eliminates rough spots and sharp edges that can damage the diaphragm and liner.

Stainless Steel System Connection
- High grade stainless steel withstands aggressive water conditions

Optional Pro-Access® Connection
- Piped to stand for fast, easy installation.



150 psig Working Pressure
- 20% higher rating than competitive well tanks.
- Every tank is pressure tested for added safety.
- Precharged to 38 psig for the most common pump cut-in pressure.

Projection Welded Air Valve
- Eliminates leak paths found on threaded valves.
- Tamper-evident warning label for added safety.

Tuf-Kote™ HG Indoor/Outdoor Coating
- Stands up to the most severe conditions.
- Standard on all models; available in blue, tan and gray.

Antimicrobial Liner

Fresh Water Turbulator™



DuraBase® Composite Tank Stand
- Optional composite stand features patent pending design.
- UV resistant material is rugged and will never corrode.
- Available separately as a spacer for steel stand models

Clean Water Technology™ in Every Tank

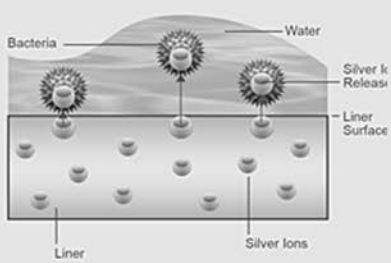
Antimicrobial Liner and Turbulator work together to keep tank surfaces clean.

ANTIMICROBIAL PROTECTION

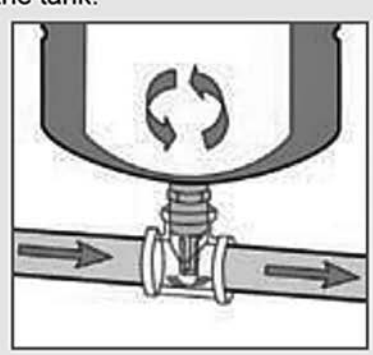
Antimicrobial Liner Protection
- Neutralizes over 99.9% of bacteria on contact.
- Safe, Silver-Ion technology only targets active microorganisms.
- Long lasting compound protects water reservoir lining for the life of the tank.

Fresh Water Turbulator™
- Patent-pending diffuser agitates incoming water stream.
- Water-jet scrubbing action prevents sediment buildup.
- Eliminates stagnant water in VFD applications.
- Helps extend the life of the tank.





TURBULATOR



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

WELLMATE CLASSIC QUICK CONNECT RESIDENTIAL CAPTIVE AIR TANKS



The Classic Quick Connect series of captive air tanks from Wellmate by Pentair utilize threadless connections at both the service connection and the tank drain assembly in order to improve both the ease of installation and serviceability.

Features & Benefits

- 100% composite construction is scratch, dent and corrosion resistant
- Lightweight, high-strength construction – ease of installation and serviceability
- Exclusive Quick Connect plumbing connection for easy installation and service
- Replaceable aircell

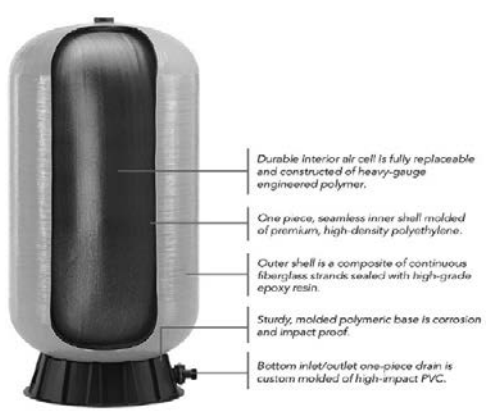
Applications

- Residential
- Light Commercial
- Agricultural

WELLMATE

ORDERING INFORMATION

PART # / MODEL #	SPECIFICATIONS				DIMENSIONS		
	CAPACITY GAL / LITRE	MAXIMUM OPERATING PRESSURE PSI / kPa / BAR	DRAWDOWN 30 / 50 SETTING GAL / LITRE	SYSTEM CONNECTION	DIAMETER INCH / CM	OVERALL HEIGHT INCH/CM	HEIGHT INLET / OUTLET TO FLOOR INCH / CM
34717 / WM-4	14.5 / 55	125 / 862 / 8.5	4.5 / 17.0	1" MNPT	16 / 41	26/66	1.75 / 4.4
34718 / WM-6	19.8 / 75	125 / 862 / 8.5	6.1 / 23.1	1" MNPT	16 / 41	32/81	1.75 / 4.4
34719 / WM-9	29.5 / 112	125 / 862 / 8.5	9.1 / 34.4	1" MNPT	16 / 41	44/112	1.75 / 4.4
34720 / WM-12	40.3 / 153	125 / 862 / 8.5	12.5 / 47.3	1" MNPT	16 / 41	57/145	1.75 / 4.4
34721 / WM-14WB	47.1 / 178	125 / 862 / 8.5	14.6 / 55.3	1.25" MNPT	21 / 53	41.3/105	2.25 / 5.7
34723 / WM-20WB	60 / 227	125 / 862 / 8.5	18.5 / 70.0	1.25" MNPT	24 / 61	41.5/105	2.25 / 5.7
34722 / WM-23	79.6 / 301	125 / 862 / 8.5	24.6 / 93.1	1.25" MNPT	21 / 53	62/157	2.25 / 5.7
34724 / WM-25WB	86.7 / 328	125 / 862 / 8.5	26.8 / 101.5	1.25" MNPT	24 / 61	55.25/140	2.25 / 5.7
34725 / WM-35WB	119.7 / 453	125 / 862 / 8.5	37 / 140.1	1.25" MNPT	24 / 61	74.25/189	2.25 / 5.7



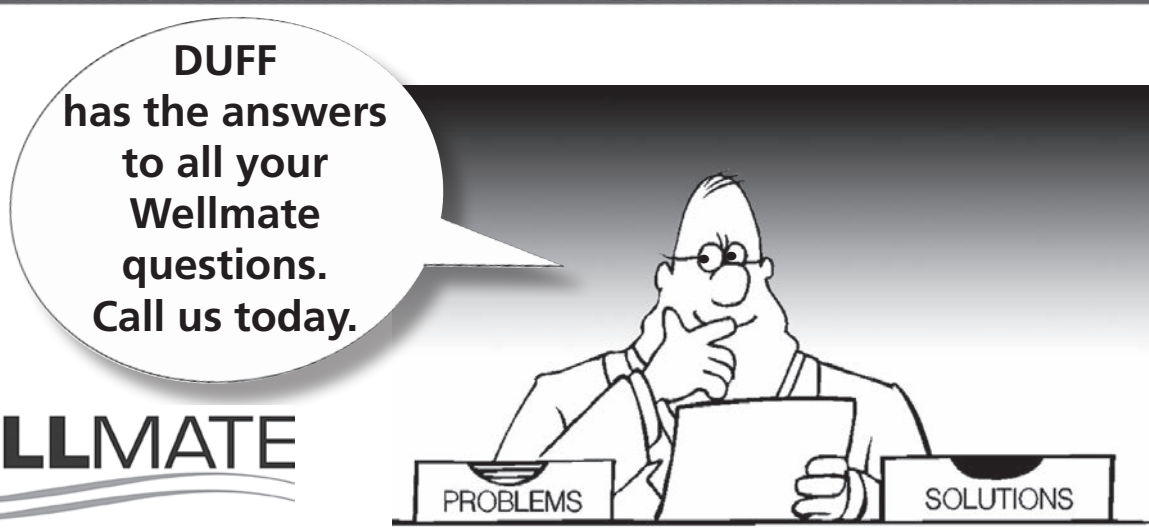
Don't Forget the Wellmate Quick Connect Tank Tee

Size	Fig. No.
1"	303665
1-1/4"	317466

TANK REPLACEMENT GUIDES

To make sure you get the right WELLMATE solution to replace your current brand, simply find your make and model below. The corresponding WELLMATE tank is clearly identified at the top of the table.

WELLMATE Pentair Water	WM-01	WM-02	WM-4	WM-6LP	WM-6	WM-9	WM-10LP	WM-12	WM-14WB	WM-20WB	WM-23	WM-25WB	WM-35WB
Gallons	2	5	14	19	20	30	34	40	47	60	80	87	119
Champion Amtrol	CH1001	CH1002	CH3001	n/a	CH4202	CH8205	n/a	CH8205	CH10050	CH12051	n/a	CH17255	CH22050
ProLine Amtrol	CA1001	CA1002	CA3001	n/a	CA4202	CA8205	n/a	CA10050	CA10050	CA12051	n/a	CA17002	CA22050
Well-Flow Amtrol	WF-6	WF-15	WF45	n/a	WF60	WF100	n/a	n/a	WF140	WF200	n/a	WF260	WF360
WellXTrol Amtrol	WX-101	WX-102	WX-201	n/a	WX-202	WX-205	n/a	WX-250	WX-250	WX-250	n/a	WX255	WX350
Clayton Mark	CM1001	CM1002	CM-200	n/a	CM-202	CM-203	n/a	n/a	CM-250	CM-251	n/a	CM-302	CM-350
Elbi	D8	D18	DV50	n/a	DV80	n/a	n/a	n/a	DV200	n/a	n/a	n/a	DV450
Challenger Flexcon	JR6	JR15	PC44	n/a	PC66	PC111	n/a	PC120	PC144	PC211	n/a	PC226	PC366
Well-Rite Flexcon	JR6	JR15	WR45	n/a	WR60	WR80	n/a	WR120	WR140	WR200	n/a	WR260	WR360
Flex-Lite	n/a	n/a	FL-5	n/a	FL-7	n/a	n/a	FL-12	FL-17	FL-22	FL-28	FL-30	FL-40
Aqua Air Goulds	V6P	V15P	V45	n/a	V60	V100	n/a	n/a	V140	V200	n/a	V250	V350
Myers	MIL2	MIL5	MPD14	n/a	MPD20	n/a	n/a	n/a	n/a	n/a	n/a	MPD86	MPD119
ConAire Sta-Rite	CA-9	n/a	n/a	n/a	CA-42	n/a	n/a	n/a	CA-120	n/a	n/a	CA-220	n/a
Fiberwound Sta-Rite	n/a	n/a	n/a	n/a	PSP-FW20-6	PSP-FW35-10	n/a	PSP-FW40-12	PSP-FW48-14	PSP-FW60-18	n/a	PSP-FW85-25	PSP-FW119-35
Vertical Steel Sta-Rite SR	n/a	n/a	PS30-T01	n/a	PSP42T-T02	PSP75T-T03	n/a	n/a	PSP120-T50	PSP200-TR51	n/a	PSP220-T52	PSP320-TR50
Vertical Steel ProSource	PS2-S01	PS5-S02	PS6-S02	n/a	PS19S-T02	PS32-T03	n/a	PS35-T05	PS50-T50	PS62-T51	n/a	PS85-T52	PS119-TR50
Vertical Steel ProSource Plus	n/a	n/a	n/a	n/a	PSP19T-02 PSP19S-T02	PSP32-T03	n/a	PSP35-T05	PSP50-T50	PSP62-T51	n/a	PSP85-T52	PSP119-TR50
Perma Tank State	PIL-2	PIL-5	PAD-14	n/a	PaAD-20	n/a	n/a	n/a	PAD-52	n/a	n/a	PAD-86	PAD-119



WELLMATE

RETENTION TANKS

GALVANIZED PUMP TANKS



75# WORKING PRESSURE				
Fig No.	CAPACITY (actual gallons)	DIAMETER (inside)	LENGTH (overall)	WEIGHT (lbs.)
42888	21	16″	26-1/2″	27
25514	30	16″	38″	56
7854	42T	16″	50″	67
7858	40S	20″	35″	75
7861	80	20″	63″	115
7864	120	24″	63″	195
23340	220	30″	73″	290
42884	315	36″	74″	390



EPOXY COATED RETENTION TANKS

- Heavy gauge steel with baked epoxy coating on interior and exterior
- Multiple tappimgs for any installation

AMTROL

Fig No.	CAPACITY (actual gallons)	SIZE (D″ x H″)	WEIGHT (lbs.)
50799	80	20 x 64	84
50800	120	24 x 66	139

TANK LEGS

- Elelevates tank above floor
- helps level tanks on uneven floors

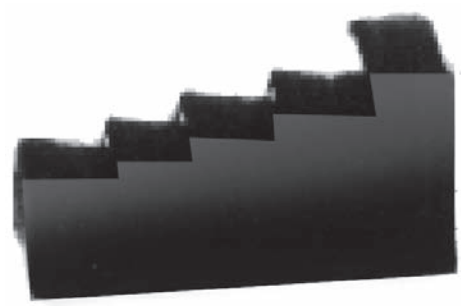


Fig No.
10574



DISCOVER HOW

DUFF DIFFERS

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STRUCTURAL® RETENTION VESSELS

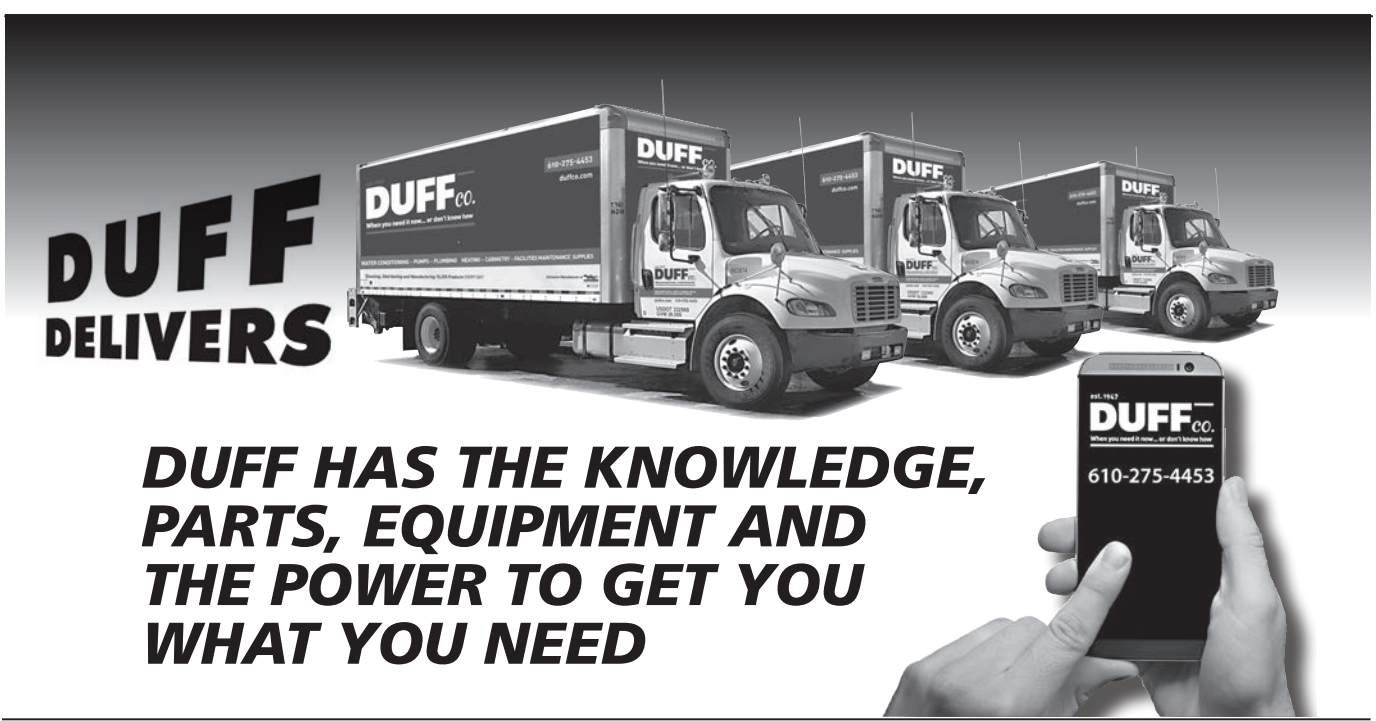
PENTAIR



FEATURES/BENEFITS

- Quick connect design
- Threadless connection eliminates potential for cross threading or over torquing
- Multiple plumbing connections available: brass or plastic, NPT, BSP, glued socket or sweat
- Vessel of choice for chemical treatment
- Provides optimal contact time Seamless inner shell of molded polyethylene for impact and corrosion resistance
- Miles of epoxy covered fiberglass filament for superior strength and light-weight Inlet/outlet PVC pipe connections offer application flexibility
- Adaptable for both new and replacement installation
- Additional drain port

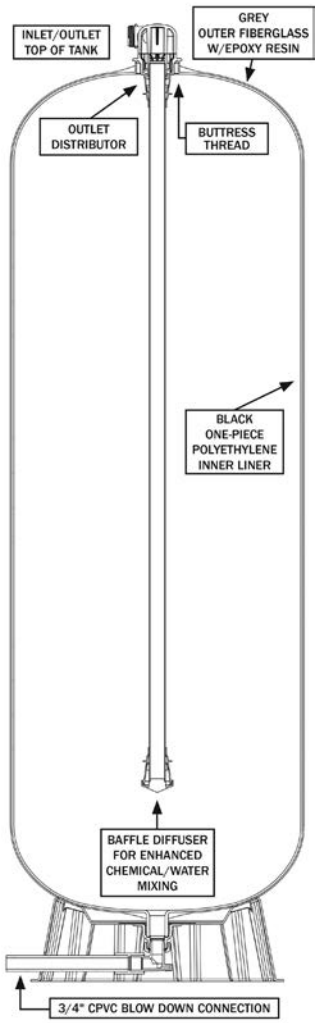
MODEL #	PART #	TOP CONNECTION	BOTTOM CONNECTION	DIMENSIONS	CAPACITY
CT-30	31534-1	1-¼" socket Q.C.	1-¼" male	16 x 44.5" (41 x 113 cm)	30 gal (113.5 L)
CT-40SQ	31533-1	1-¼" socket Q.C.	1-¼" male	21 x 36" (53 x 91 cm)	40 gal (151.2 L)
CT-40	31608-1	1-¼" socket Q.C.	1-¼" male	16 x 57.25" (40.6 x 145 cm)	40 gal (151.2 L)
CT-80	30957-1	1-¼" socket Q.C.	1-¼" male	21 x 62.75" (53 x 159 cm)	80 gal (302.4 L)
CT-120	31057-1	1-¼" socket Q.C.	1-¼" male	24 x 73.25" (61 x 186 cm)	120 gal (454 L)



For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

RETENTION TANKS





Clack™

FEATURES

- Convenient Inlet/Outlet piping connection at the top of the tank
- Inlet/Outlet Adapter easily accommodates the use of a vacuum breaker
- Inlet/Outlet Buttress thread for strength
- Bypass valve option available
- Full 3/4" blow down drain at lowest point of tank
- 360° degree drain orientation
- Black one piece polyethylene liner for impact and corrosion resistance
- 5-year limited warranty

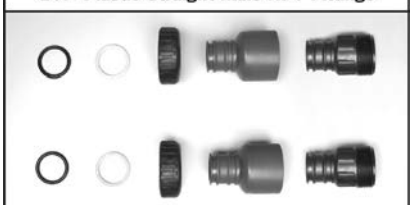
SPECIFICATIONS

Maximum Operating Pressure 75 psi/517 kPa

- Maximum Operating Temperature 120°F 49°C
- Maximum Allowable Operating Vacuum 0
- A Vacuum/Pressure Relief Valve of adequate size must be incorporated in the plumbing

FITTINGS INCLUDED:

1¼" x 1½" PVC Straight Solvent Fitting Kit and 1¼" Plastic Straight Male NPT Fittings



V3007-07 V3317

OPTIONAL:

Bypass

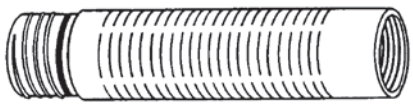


V3006

ORDER NO.	DESCRIPTION	TANK ASSEMBLY DIAMETER INCHES/MM	TANK ASSEMBLY HEIGHT INCHES/MM	CAPACITY GALLONS/LITERS	QTY/ CARTON	SHIPPING WEIGHT LBS/KG
C2250	RT40 Retention Tank	21/533	40.5/1,029	40/151	1	37/17
C2251	RT80 Retention Tank	21/533	67.5/1,715	80/303	1	66/30
C2252	RT120 Retention Tank	24/607	78.5/1,994	120/454	1	80/36

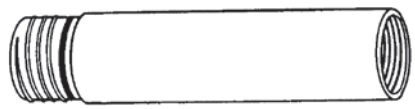
ORDER NO.	DESCRIPTION	QTY/CARTON	SHIPPING WEIGHT LBS/KG
V3006	Bypass	24	26/12

STANDARD SCH 40 PVC WELL SCREENS WITH MALE X FEMALE FLUSH THREAD



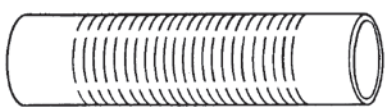
SIZE	.010 SLOT	PRICE	.020 SLOT	PRICE
2"x2 1/2'	48672		48679	
2"x5'	48673		48680	
2"x10'	48674		17811	
2"x20'	48675		48681	
4"x2 1/2'	48676		48685	
4"x5'	48677		43652	
4"X10'	17810		21261	
4"X20'	48678		48682	

STANDARD SCH 40 PVC CASING WITH MALE X FEMALE FLUSH THREAD (NON-SLOTTED)



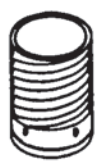
SIZE	FIG. NO.	PRICE
2"x2 1/2'	30196	
2"x5'	30327	
2"x10'	48669	
2"x20'	48670	
4"x2 1/2'	21266	
4"x5'	21264	
4"X10'	21267	
4"X20'	48671	

STANDARD SCH 40 PVC WELL SCREEN PLAIN ENDS (NON-THREADED)



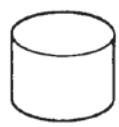
SIZE	.016 SLOT	PRICE	.010 SLOT	PRICE	.020 SLOT	PRICE
2x10	52584		-	-	-	-
4x10	-	-	51609		51610	

PVC FLUSH JOINT PLUGS



SIZE	FIG. NO.	PRICE
2"	30197	
4"	21262	

PVC FLUSH JOINT CAPS



SIZE	FIG. NO.	PRICE
2"	30195	
4"	21263	

CLEAR PVC BAILERS



SIZE	FIG. NO.
11/4"X15"	PVCV215
11/4"X36"	PVCB236
11/4"X48"	PVCB248

MONITORING WELL MANHOLE



12 X 12 flush Mount Monitoring Well Manhole. The 8"EWP Manhole is intended to be used as an access port for monitoring well installed in a drive-way. It is designed to help protect the well from any unauthorized access.
The Cover has the works 'monitoring well" cast into it in large letters. Two bolts hold the cover tightly to the rim making it accessible only with a wrench. A Guna-N gasket prevents surface water or product from entering the contaminating the well. Inside diameter will accommodate up to a 4" well plug.

SIZE	FIG. NO.
12X12	53406
8X12	48686

WWW.DUFFCO.COM
est. 1947 DUFF CO. When you need it now... or don't know how WWW.DUFFCO.COM

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.


GRUNDFOS
Redi-Flo
SUBMERSIBLE PUMPS FOR ENVIRONMENTAL APPLICATIONS
CREEK
MONITORING WELL
MONITORING WELL
LEVEE
RECOVERY WELL
OLD GAS PLANT
370
368
375
380
390

STAINLESS STEEL SUBMERSIBLE PUMPS
FOR ENVIRONMENTAL PURGE & SAMPLING APPLICATIONS

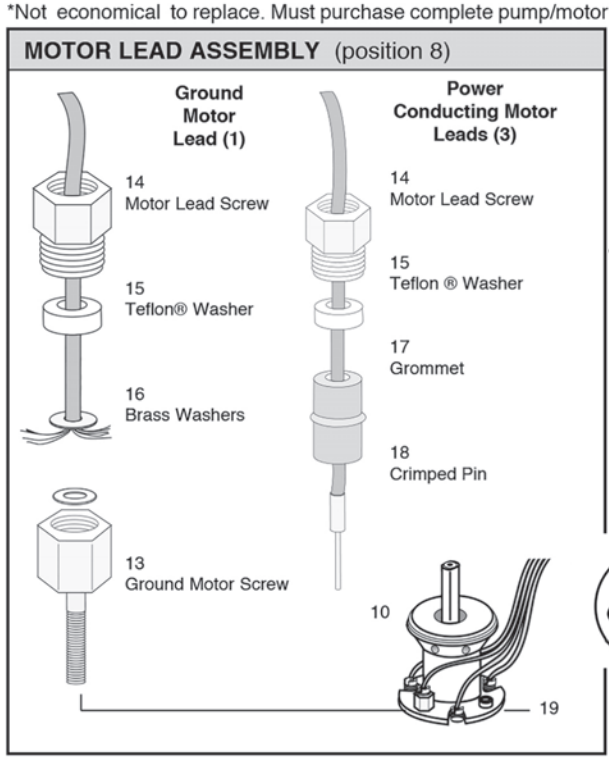
GRUNDOS REDI-FLO 2/MP1: THE INDUSTRY'S CHOICE FOR ENVIRONMENTAL APPLICATIONS

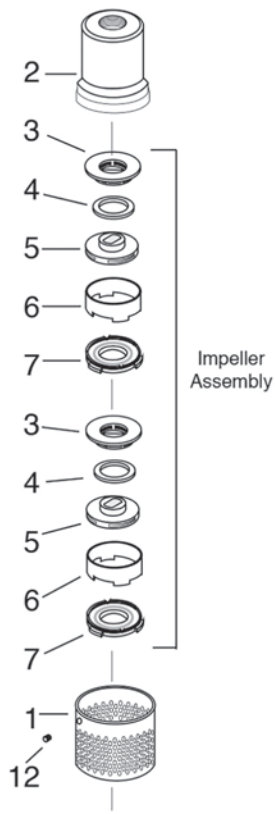
Assembly Diagram — Redi-Flo2®

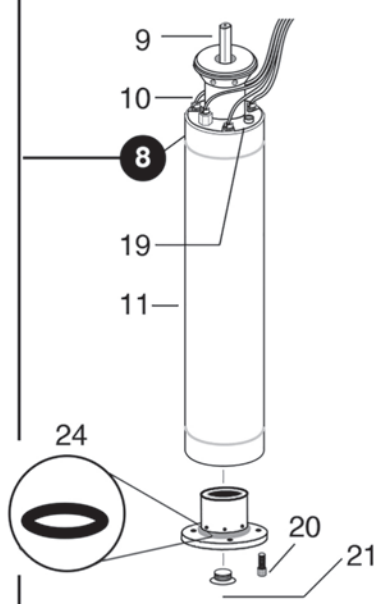
Pump Components

Pos. No.	Part Description	No. Used Per Pump	Part Number
1	Inlet Screen	1	1A0004
2	Pump Housing 1/2" NPT	1	1A0044
3	Guide Vane	2	see Service Kits
4	Wear Ring	2	"
5	Impeller	2	"
6	Spacer Ring	2	"
7	Wear Plate	2	"
8	Motor Lead Assembly	4	see Pos. 13 - 18
9	Shaft	1	not available *
10	Suction Interconnector	1	1A5004
11	Stator Housing	1	not available *
12	Set Screw	1	see Service Kits
13	Ground Motor Screw	1	"
14	Motor Lead Screw	4	"
15	Teflon® Washer	4	"
16	Brass Washer	2	"
17	Grommet	3	"
18	Crimped Pin	3	"
19	Motor Screw (long)	2	"
20	Motor Screw (short)	6	"
21	Filling Screw w/ O-Ring	1	"
22	Motor Thrust Washers	2	"
23	Lip Seal	1	ID5566
24	Bearing Housing O-Ring	2	see Service Kits

Teflon® is a registered trademark of Du Pont
*Not economical to replace. Must purchase complete pump/motor









GRUNDFOS®

CONTACT DUFF FOR COMPLETE INFO ON GRUNDFOS ENVIRONMENTAL PUMPS



WWW.DUFFCO.COM
INFO@DUFFCO.COM
610-279-4453

For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

GRUNDFOS ENVIRONMENTAL VARIABLE FREQUENCY DRIVE



The Environmental Variable Frequency Drive (VFD) has been uniquely designed to operate and protect the MP1Variable Performance Groundwater Sampling Pump and the SPE 4" Variable Performance Sampling / Remediation Pumps. Due to the sophisticated electronics within the VFD, the operator can easily change between the MP1 and SPE 4" Variable Performance Pumps by pressing a button. With the pressing of another button, the operator can precisely control the discharge flow rate from the pump from a maximum of 50 gallons per minute to a minimum of 100 milliliters per minute, to depths to 524 feet of head.Unlike most variable frequency drives, this VFD is compatible with either 120V or 230V single-phase, AC input power. The operator can simply change the power cord to accommodate the different voltages.The VFD can also be purchased without the carrying case for use in dedicated applications.

GRUNDFOS®

THE UNIQUE FEATURES OF THE ENVIRONMENTAL VFD:

- **PRECISE FLOW CONTROL**
  — The push button control pad provides greater control over the pump's discharge flow rate for better accuracy and precision during sampling.
- **WIDE PERFORMANCE RANGE**
  — Instead of operating according to one performance curve, the VFD allows for coverage of a range of performances and can function at any point of operation within that range.
- **MOTOR PROTECTION**
  — The VFD will protect the Environmental Performance Pumps from adverse motor conditions such as, over-and-under-voltage, over-current, and groundfault.
- dual input power capability
  — Either 120V or 230V, single-phase AC input power is accommodated simply by changing the power cord.
- **DUAL FUNCTIONALITY**
  — The VFD can be easily switched to operate either the MP1 pump or the SPE 4" Variable Performance Pumps.
- **ENCLOSURE**
  — The VFD NEMA 4 enclosure is designed for outdoor duty and is resistant to damage as a result of \incidental exposure to rain or splashing water.

GRUNDFOS SUBMERSIBLE ENVIRONMENTAL PUMPS



Grundfos Redi-Flo3™ SQE-NE

The Grundfos Redi-Flo3™ SQE-NE Electrical Submersible Pump is ideal for the removal of polluted groundwater. Users have the capability to change the pump performance while the pump is installed in the well.

Typical applications include: environmental remediation, leachate extraction, total fluids recovery, tank-to-tank transfer, and sampling. Systems are available for your portable or dedicated pumping needs.

Advanced Electronics - Permanent-magnet motors, and Grundfos' own micro-frequency converter offer the capability to control & communicate with the pump to monitor performance and set operating parameters.

Permanent-Soft Start System - The motor has a soft-start system which allows the pump to start with gradually increasing speed and with the highest possible starting torque.

Rugged Design - The pump uses "floating" impellers. Each impeller has its own tungsten carbide/ceramic bearing. This design & the environmentally tough 316 stainless steel, PVDF construction provide excellent wear resistance and solids handling capability.

Permanent-Magnet Motor - The motor is protected against: dry-run, overvoltage, undervoltage, overload, overtemperature virtually eliminating down time.

Reliable Check Valves - Reliable built-in spring loaded check valve lets you operate the pump in a position from vertical to horizontal.

Optional CU 300 Status Box and MI301 Remote - Allows you to communicate with the pump's integrated electronics through the standard power leads.





GRUNDFOS®



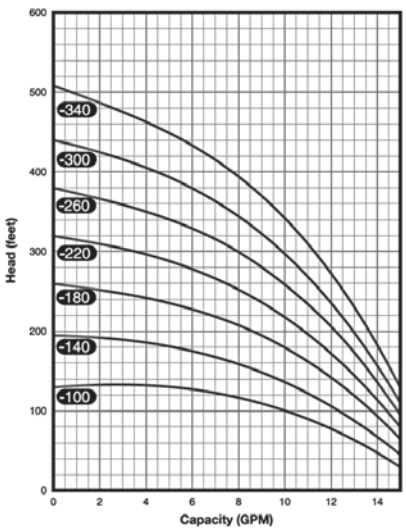
Grundfos Redi-Flo4™ submersible pumps are constructed of virgin PTFE and stainless steel to handle the rigors of contaminated groundwater pumping. Ideal for sampling and continuous operation in remediation applications. Grundfos Redi-Flo4™ Environmental submersibles meet EPA guidelines for environmental equipment and have been proven through extensive use in the field to be the industry choice.

For applications in 4 inch diameter and larger wells

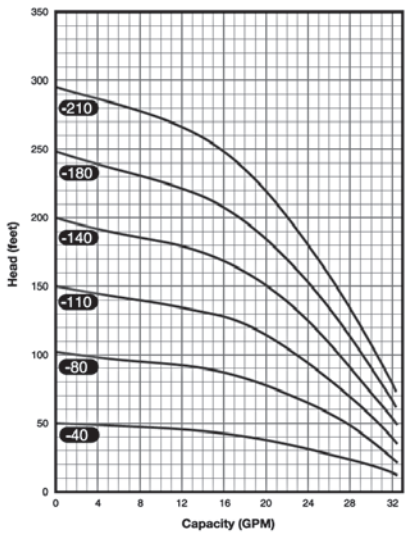
- Efficient purging/remediation to depths of 524 feet
- Flow rates of up to 45 GPM (170 LPM) for purging and remediation
- Stainless steel and PTFE are the only materials used in the Redi-Flo4 submersible pump ends
- Features built-in check valve to prevent backflow into well once pump is shut down
- User friendly cable guard aids in the installation of motor lead
- Variable speed pump applications available
- Variable speed controller can run both Redi-Flo2® and certain 2 hp Redi-Flo4™ models.

GRUNDFOS REDI-FLO 3

GRUNDFOS SUBMERSIBLE ENVIRONMENTAL PUMPS



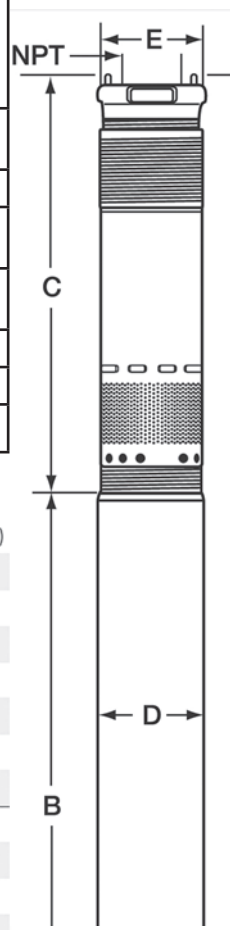
Grundfos Redi-Flo3™ SQE-NE 10gpm



Grundfos Redi-Flo3™ SQE-NE 22gpm

GENERAL	
Well Diameter	Minimum 3 in. (76 mm)
Installation Depth	Maximum 500 ft. (150 m) below static water table
Variable Speed Control	30%-100% (3,000, 10,700 RPM)
Material	Stainless steel complying with DINW. Nr 1.4401 (AISI 316), PVDF and FPM rubber
ELECTRIC:	
Supply Voltage	1 x 200-240V +6%/-10%, 50/60 Hz PE
	1 x 100-115V
Operation via Generator	The generator output must be equal to the motor P1(KW) +10%
Starting Current	The motor starting current is equal to the highest value stated on the motor nameplate
Starting	Soft-start
Run-up Time	2 seconds maximum

Motor Protection	The motor is protected against: dry-run, over-voltage, under-voltage, over-load, over-temperature and upthrust
Power Factor	PF = 1
Service Factor	0.5-1.85 HP @ 115V/230V 0.75-2.05 HP @ 230V 1.0-2.25 HP @ 230V 1.5-1.65 HP @ 230V
Motor Cable	2 Wire with ground, Tefzel® Cable Kit (Santoprene® available)
pH Values	5-9
Liquid Temperature	The temperature of the pumped liquid should not exceed 104°F
Note: If liquids with a viscosity or specific gravity higher than that of water are to be pumped, please contact Duff	
Min Ambient Temp	-4°F (-15°C)
Max Ambient Temp	+104°F (40°C)
Max Liquid Temp	86°F (30°C)



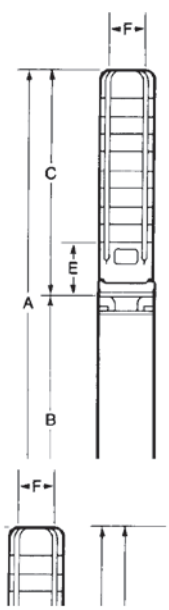
Dimensions and Weight:

Model Number	HP	Discharge Size	Dimensions in Inches (cm) A	B	C	D	E	Approximate Ship Weight lbs. (kg)
10Redi-Flo3 SQE-100NE	½	1 ¼" NPT	30.4 (77.2)	19.8 (50.3)	10.6 (27)	2.6 (6.6)	2.9 (7.4)	12 (5.4)
10Redi-Flo3 SQE-140NE	½	1 ¼" NPT	30.4 (77.2)	19.8 (50.3)	10.6 (27)	2.6 (6.6)	2.9 (7.4)	12 (5.4)
10Redi-Flo3 SQE-180NE	¾	1 ¼" NPT	31.5 (80)	19.8 (50.3)	11.6 (29.5)	2.6 (6.6)	2.9 (7.4)	13 (5.9)
10Redi-Flo3 SQE-220NE	¾	1 ¼" NPT	33.6 (77.7)	19.8 (50.3)	13.7 (34.8)	2.6 (6.6)	2.9 (7.4)	13 (5.9)
10Redi-Flo3 SQE-260NE	1	1 ¼" NPT	35.0 (89)	21.3 (54.1)	13.7 (34.8)	2.6 (6.6)	2.9 (7.4)	16 (7.3)
10Redi-Flo3 SQE-300NE	1	1 ¼" NPT	36.1 (91.7)	21.3 (54.1)	14.8 (37.6)	2.6 (6.6)	2.9 (7.4)	16 (7.3)
10Redi-Flo3 SQE-340NE	1	1 ¼" NPT	38.2 (97)	21.3 (54.1)	16.9 (42.9)	2.6 (6.6)	2.9 (7.4)	16 (7.3)
22Redi-Flo3 SQE-40NE	½	1 ½" NPT	30.4 (77.2)	19.8 (50.3)	10.6 (27)	2.6 (6.6)	2.9 (7.4)	12 (5.4)
22Redi-Flo3 SQE-80NE	½	1 ½" NPT	30.4 (77.2)	19.8 (50.3)	10.6 (27)	2.6 (6.6)	2.9 (7.4)	12 (5.4)
22Redi-Flo3 SQE-110NE	¾	1 ½" NPT	31.5 (80)	19.8 (50.3)	11.6 (29.5)	2.6 (6.6)	2.9 (7.4)	13 (5.9)
22Redi-Flo3 SQE-140NE	¾	1 ½" NPT	33.6 (77.7)	19.8 (50.3)	13.7 (34.8)	2.6 (6.6)	2.9 (7.4)	13 (5.9)
22Redi-Flo3 SQE-180NE	1	1 ½" NPT	38.2 (97)	21.3 (54.1)	16.9 (42.9)	2.6 (6.6)	2.9 (7.4)	16 (7.3)
22Redi-Flo3 SQE-210NE	1 ½	1 ½" NPT	38.2 (97)	21.3 (54.1)	16.9 (42.9)	2.6 (6.6)	2.9 (7.4)	16 (7.3)

Note: Weights include pump ends with motors.

GRUNDFOS REDI-FLO4

5E	MOTOR				DIMENSIONS (IN INCHES)						NET WGHT (LBS) **	SHIP WGHT (LBS) **
PUMP TYPE	HP	SF	PH	VOLTS	OVRLL LNGTH A	MOTOR LNGTH B*	PUMP END LNGTH C	MAX. DIA. D	INLET E	DISCH PIPE SIZE (NPT) F		
5E3	1/3	1.75	1	230	18 9/16	40 5/16	10	13 9/6	8 9/16	3 31/32	3 1/4	1
5E5	1/3	1.75	1	230	20 5/16		10		10 5/16	3 31/32	3 1/4	1
5E8	1/3	1.75	1	230	22 3/4		10		12 3/4	3 31/32	3 1/4	1
5E12	1/2	1.60	1	230	26		10		16	3 31/32	3 1/4	1
5E17	3/4	1.50	1	230	13/16		13/16		20 3/16	3 31/32	3 1/4	1
5E21	1	1.40	1	230	31 7/16		11 3/8		23 7/16	3 31/32	3 1/4	1
5E25	1 1/2	1.30	1	230	35 7/16		12		26 3/4	3 31/32	3 1/4	1
10E												
10E5	1/3	1.75	1	230	20 5/16	35 3/8	10	13 9/16	10 5/16	21	3 31/32	3 1/4
10E8	1/2	1.60	1	230	23 9/16		10		12 3/4	13/16	3 31/32	3 1/4
10E11	3/4	1.50	1	230	26 9/16		13/16		15 3/16	3 31/32		3 1/4
10E14	1	1.40	1	230	29		11 3/8		17	3 31/32		3 1/4
10E19	1 1/2	1.30	1	230	11/16		12		11/16	3 31/32		3 1/4
16E												
16E4	1/2	1.60	1	230	20 1/4	10	13 9/16	9 7/16	3 31/32	3 1/4	1 1/4	25
16E7	3/4	1.50	1	230	23 1/4	13/16		11 7/8	3 31/32	3 1/4	1 1/4	27
16E9	1	1.40	1	230	25 9/16	11 3/8		13 9/16	3 31/32	3 1/4	1 1/4	28
16E13	1 1/2	1.30	1	230	30 7/16	12		16 7/8	3 31/32	3 1/4	1 1/4	33
25E												
25E3	1/2	1.60	1	230	19 3/8	26 5/16	10	13 9/16	8 9/16	3 31/32	3 1/4	1 1/2
25E4	3/4	1.50	1	230	20		13/16		9 7/16	3 31/32	3 1/4	1 1/2
25E16	1	1.40	1	230	13/16		11 3/8		11 1/16	3 31/32	3 1/4	1 1/2
25E18	1 1/2	1.30	1	230	23 1/16		12		21 3/4	3 31/32	3 1/4	1 1/2



1. You must specify voltage, phase, and whether you want to operate with a control box (3 wire) or without (2 wire).

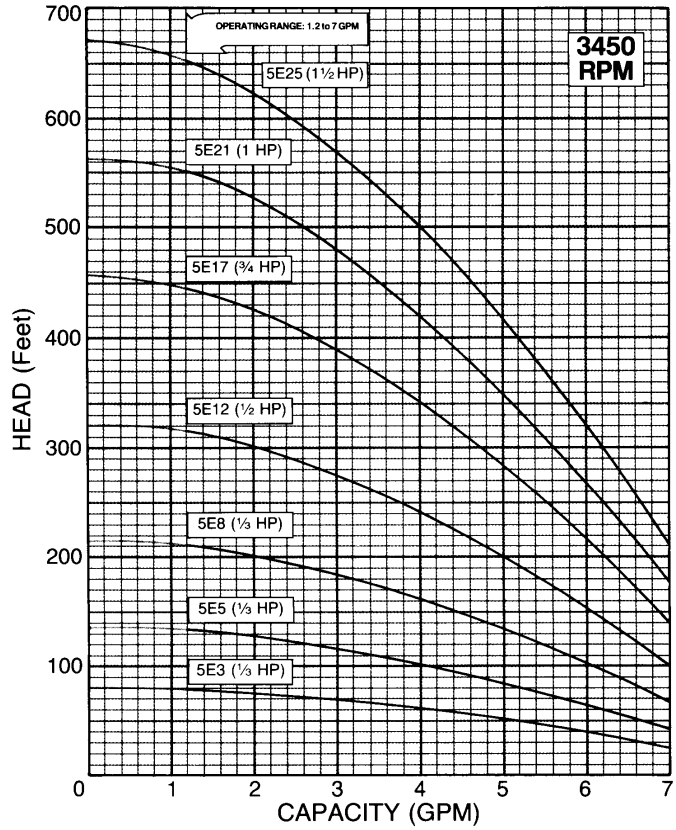
2. Any other Grundfos submersible pump or motor can be retrofitted with Teflon trim for environmental use.



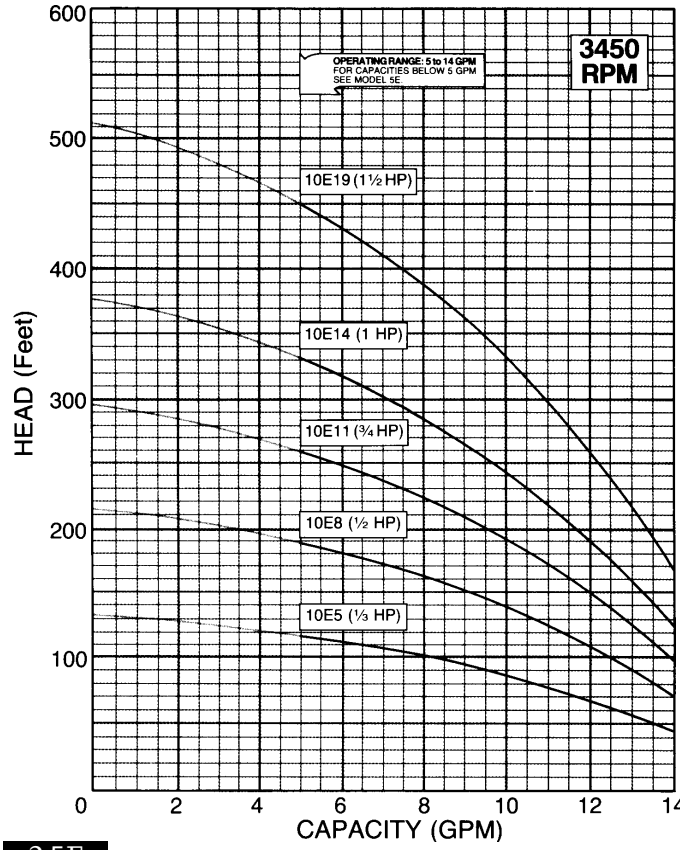
*Data for Grundfos MS402E motors. **Does note include motor leads.

GRUNDFOS REDI-FLO4 PERFORMANCE CURVES

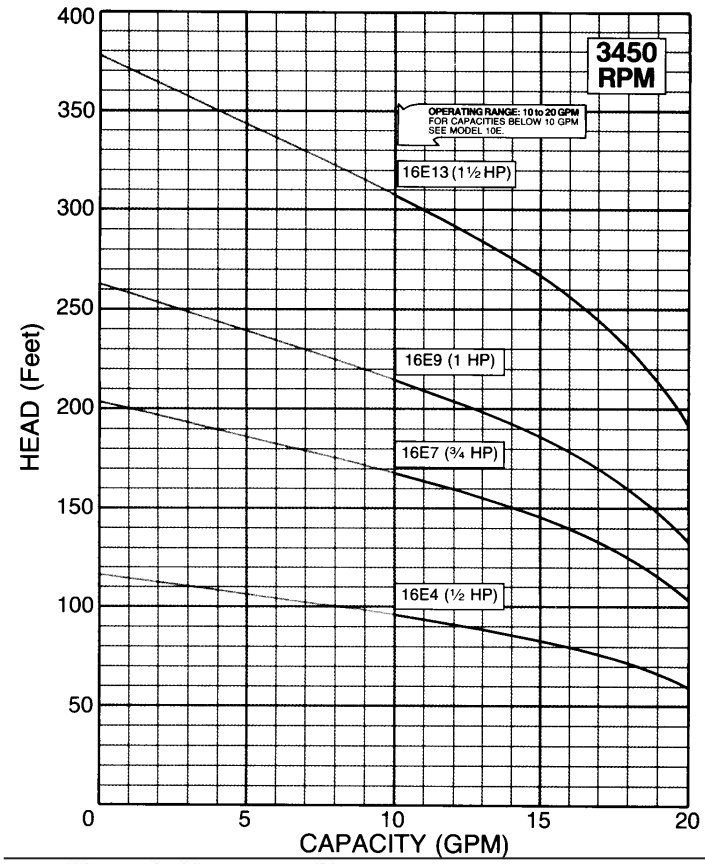
5E



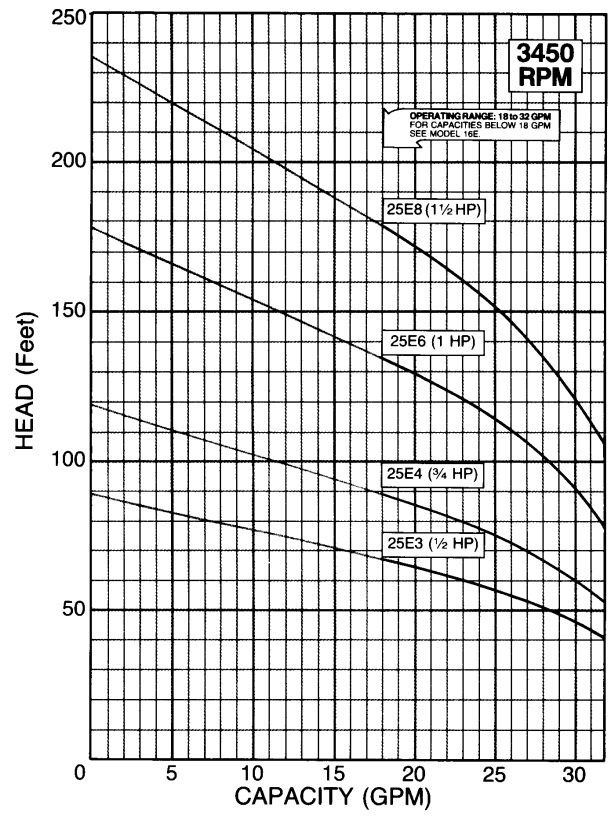
10E



16E



25E



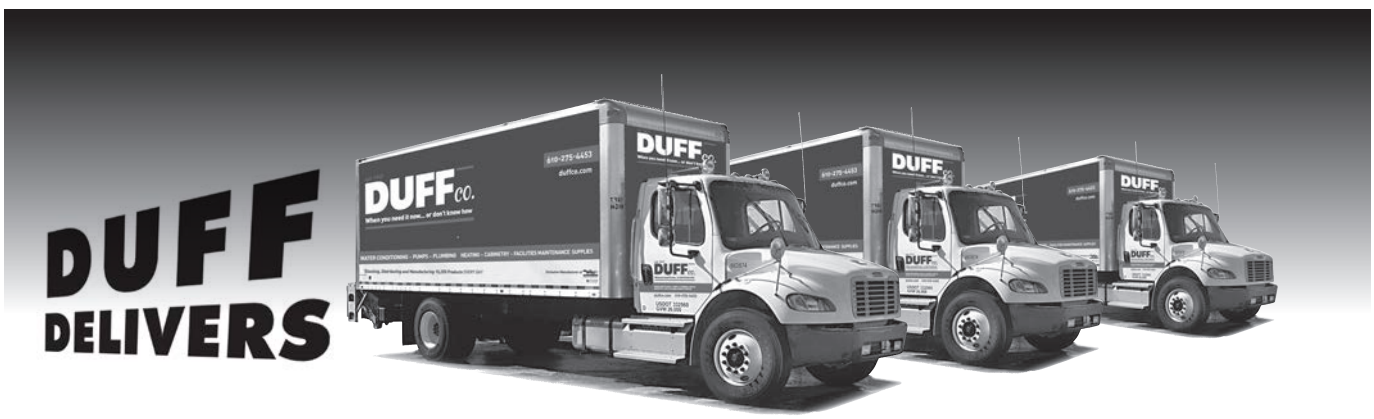
GRUNDFOS ENVIRONMENTAL RETROFITTED SUBMERSIBLE PUMPS

These Grundfos submersible pumps are made of stainless steel and retrofitted with PTFE to handle the rigors of contaminated groundwater pumping and continuous operation in remediation applications. Built to deliver optimum efficiency during periods of high demand, all Grundfos pumps provide low, long-term operating costs and high operating reliability regardless of the application.

Enviro retrofitted Grundfos submersibles meet government guidelines for environmental equipment and have been proven through extensive use in the field.



4" & LARGER WELLS:	
5 GPM:	Grundfos 5S Enviro Retrofitted Pumps
7 GPM:	Grundfos 7S Enviro Retrofitted Pumps
10 GPM:	Grundfos 10S Enviro Retrofitted Pumps
16 GPM:	Grundfos 16S Enviro Retrofitted Pumps
25 GPM:	Grundfos 25S Enviro Retrofitted Pumps
35 GPM:	Grundfos 35S Enviro Retrofitted Pumps
45 GPM:	Grundfos 45S Enviro Retrofitted Pumps
62 GPM:	Grundfos 62S Enviro Retrofitted Pumps
77 GPM:	Grundfos 77S Enviro Retrofitted Pumps
6" & LARGER WELLS:	
85 GPM:	Grundfos 85S Enviro Retrofitted Pumps
150 GPM:	Grundfos 150S Enviro Retrofitted Pumps
230 GPM:	Grundfos 230S Enviro Retrofitted Pumps
300 GPM:	Grundfos 300S Enviro Retrofitted Pumps
8" & LARGER WELLS:	
385 GPM:	Grundfos 385S Enviro Retrofitted Pumps
475 GPM:	Grundfos 475S Enviro Retrofitted Pumps
10" & LARGER WELLS:	
625 GPM:	Grundfos 625S Enviro Retrofitted Pumps
800 GPM:	Grundfos 800S Enviro Retrofitted Pumps
1100 GPM:	Grundfos 1100S Enviro Retrofitted Pumps



ENVIRONMENTAL MOTOR LEADS

At Duff, we specialize in custom motor leads for Franklin Electric and Grundfos motors. The continuous motor leads allow the motor to be installed without making an underwater splice. Because of the harsh nature of many environmental remediation sites, continuous motor leads come in a variety of chemical- and heat-resistant materials such as TEFLON®, CPE/XLPE, HILO, SOOW and PVC. These motor leads can be manufactured to the specific depth of the well and many are in stock in 25' increments. If you're looking for something special, just give us a call!

Inquire with a Duff pump expert about special TEFLON®-fitted pump ends
- Size: 4", 6", 8" diameter
- Flow Range: 0 - 1100 gpm
- Total Dynamic Head: 0 - 1500 ft
- HP Range: 0.5 - 250 hp
- Discharge Size: 1 - 6"
- Applications: environmental remediation, leachate extraction, total fluids recovery, tank-to-tank transfer, and sampling

GRUNDFOS ENVIRONMENTAL MOTOR LEADS

Flat Jacketed TEFLON™					
Fig. No.	Type	Fig. No.	Type	Fig. No.	Type
184625	Grundfos 25' Redi-Flo3 Lead	41184	Grundfos 50' 2-Wire Redi-Flo4 Lead	41200	Grundfos 75' 3-Wire Redi-Flo4 Lead
183990	Grundfos 50' Redi-Flo3 Lead	41186	Grundfos 75' 2-Wire Redi-Flo4 Lead	41202	Grundfos 100' 3-Wire Redi-Flo4 Lead
186820	Grundfos 75' Redi-Flo3 Lead	41188	Grundfos 100' 2-Wire Redi-Flo4 Lead	41204	Grundfos 125' 3-Wire Redi-Flo4 Lead
186448	Grundfos 100' Redi-Flo3 Lead	41190	Grundfos 125' 2-Wire Redi-Flo4 Lead	41205	Grundfos 150' 3-Wire Redi-Flo4 Lead
186795	Grundfos 125' Redi-Flo3 Lead	41191	Grundfos 150' 2-Wire Redi-Flo4 Lead	41207	Grundfos 175' 3-Wire Redi-Flo4 Lead
187996	Grundfos 200' Redi-Flo3 Lead	41193	Grundfos 175' 2-Wire Redi-Flo4 Lead	41208	Grundfos 200' 3-Wire Redi-Flo4 Lead
104405	Grundfos 150' Redi-Flo3 Lead	41194	Grundfos 200' 2-Wire Redi-Flo4 Lead	128111	Grundfos 250' 3-Wire Redi-Flo4 Lead
104406	Grundfos 175' Redi-Flo3 Lead	41196	Grundfos 25' 3-Wire Redi-Flo4 Lead		
219166	Grundfos 300' Redi-Flo3 Lead	41198	Grundfos 50' 3-Wire Redi-Flo4 Lead		

TEFLON® Twisted Submersible Pump Cable					
Fig. No.	Type	Fig. No.	Type	Fig. No.	Type
TEFLON® / 2-Wire					
94685	15' 2-Wire TEFLON®	41189	100' 2-Wire TEFLON®	41195	200' 2-Wire TEFLON®
41183	25' 2-Wire TEFLON®	178258	125' 2-Wire TEFLON®	84077	300' 2-Wire TEFLON®
41185	50' 2-Wire TEFLON®	41192	150' 2-Wire TEFLON®	94687	450' 2-Wire TEFLON®
41187	75' 2-Wire TEFLON®	94686	175' 2-Wire TEFLON®		
TEFLON® / 3-Wire					
41197	25' 3-Wire TEFLON®	41203	100' 3-Wire TEFLON®	79955	175' 3-Wire TEFLON®
41199	50' 3-Wire TEFLON®	82943	125' 3-Wire TEFLON®	41209	200' 3-Wire TEFLON®
41201	75' 3-Wire TEFLON®	41206	150' 3-Wire TEFLON®		



TEFZEL® Jacketed Submersible Pump Cable (abrasion resistant)	
TEFZEL®	
207390	25' TEFZEL® Jacketed 3-Wire
84245	100' TEFZEL® Jacketed 3-Wire
124914	200' TEFZEL® Jacketed 3-Wire



FRANKLIN ELECTRIC ENVIRONMENTAL MOTOR LEADS

Santoprene® twisted and jacketed type cable furnished in pre-cut lengths with water tight ETP fluoroelastomer plug on one end for direct connection to Franklin motor. Stranded copper conductor, 2-wire with ground or 3-wire with ground.

FEATURES

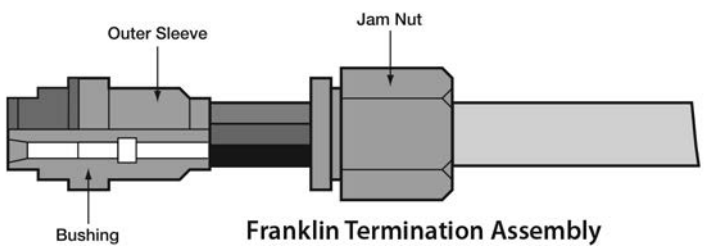
- For use with submersible pumps in water wells, cable is UL approved for this application.
- Suitable for hot or cold conditions, from -50°F to 200°F, 105°C dry, 75°C wet, 60°C in oil.
- Santoprene® Thermoplastic rubber is inherently resistant to a wide variety of oils, solvents and chemicals.
- The overall jacket has a .020" wall of Santoprene® that is abrasion resistant
- Section 501-11 of the 1990 National Electric Code, entitled flexible cords, Class 1, Division 1 and 2 (pages 70-442) has been interpreted by inspectors such that a flexible cord is appropriate for use with Electrical Submersible Pump in Class I, Division I, Group D applications. This is accomplished by the drop pipe connected to the pump or by the safety cable. Jacketed Santoprene® lead generally meets the flexible cord requirements as interpreted by these inspectors.
- Santoprene® should not be used in free product applications. Please use a FEP Fluoropolymer.



Jacketed 3-wire with ground



Twisted 3-wire with ground and Franklin Termination



Franklin Termination Assembly

Franklin Electric

Hi/Lo (Santoprene®) Twisted & Jacketed Submersible Pump Cable					
Hi-Lo / 2-Wire / Twisted					
Fig. No.	**Type**	**Fig. No.**	**Type**	**Fig. No.**	**Type**
65774	25' Hi-Lo 2-Wire Twisted	65779	100' Hi-Lo 2-Wire Twisted	50098	250' Hi-Lo 2-Wire Twisted
37627	50' Hi-Lo 2-Wire Twisted	50095	150' Hi-Lo 2-Wire Twisted	50100	300' Hi-Lo 2-Wire Twisted
176906	75' Hi-Lo 2-Wire Twisted	50097	200' Hi-Lo 2-Wire Twisted		
Hi-Lo / 2-Wire / Jacketed					
65784	25' Hi-Lo 2-Wire Jacketed	65785	100' Hi-Lo 2-Wire Jacketed	50107	250' Hi-Lo 2-Wire Jacketed
50094	50' Hi-Lo 2-Wire Jacketed	37638	150' Hi-Lo 2-Wire Jacketed	50115	300' Hi-Lo 2-Wire Jacketed
118612	75' Hi-LO 2-Wire Jacketed	65786	200' Hi-Lo 2-Wire Jacketed		
Hi-Lo / 3-Wire / Twisted					
50102	25' Hi-Lo 3-Wire Twisted	50103	100' Hi-Lo 3-Wire Twisted	50105	200' Hi-Lo 3-Wire Twisted
50099	50' Hi-Lo 3-Wire Twisted	50104	150' Hi-Lo 3-Wire Twisted	50106	250' Hi-Lo 3-Wire Twisted
100008	75' Hi-Lo 3-Wire Twisted	115089	175' Hi-Lo 3-Wire Twisted	50108	300' Hi-Lo 3-Wire Twisted
Hi-Lo / 3-Wire / Jacketed					
65788	25' Hi-Lo 3-Wire Jacketed	61644	100' Hi-Lo 3-Wire Jacketed	50113	200' Hi-Lo 3-Wire Jacketed
65789	50' Hi-Lo 3-Wire Jacketed	50112	150' Hi-Lo 3-Wire Jacketed	50114	250' Hi-Lo 3-Wire Jacketed
73730	75' Hi-Lo 3-Wire Jacketed	69742	175' Hi-Lo 3-Wire Jacketed	50116	300' Hi-Lo 3-Wire Jacketed

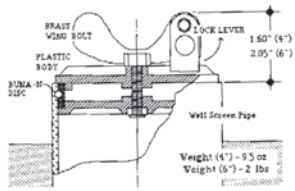
For additional information call: 610-275-4453 or Fax: 610-279-6299.
Please call for current prices.

MONITORING WELL ACCESSORIES

2", 4" and 6" LOCKING PLUG.

One piece watertight temperproof. Bright plastic housing, brass wing-bolt , buna-N disc, and SS lock lever. Unit is made to plug, seal and lock-in-place on a 2", 4" or 6" pupe (sch 40 PVC) without special preparations to the pipe. 'TEST WELL" warning is molded to the cap.



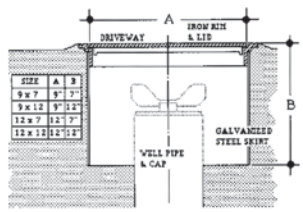


BASIC STYLE - TEST WELL MANHOLE

Regular access, non-watertight, economical. Consists of a cast iron lid and cast iron rim riveted to a galvanized shee metal skirt. "TEST WELLL" warning is cast directly on the lid. This manhole provides a simple economical box for monitoring wells in cases when 'limited access' or 'water-tright' features are not neeed.

AVAILABLE SIZES: 9"x7", 9"x12", 12:x7", 12"x12".



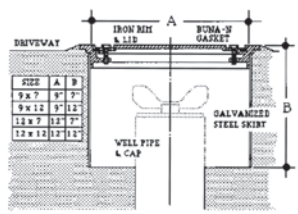


LIMITED ACCESS MANHOLE

Limited access, weather resistant, built to last. Consists of a cast iron lid and rim, replaceable 'Buna-N gasket, galva-nized sheet metal skirt, and stainless steel bolts. Lugs on inside of body rim are threaded for bolts to draw lid down tight. Bolted cover provides weather tight seal and 'limited access' feature.

AVAILABLE SIZES: 9"x7", 9"x12", 12:x7", 12"x12".



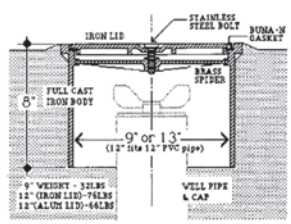


WATERTIGHT MANHOLE

True watertight, limited access, top-of-the-line. Consists of a full-cast, one-piece iron body and skirt, cast ironlid, brass spider, replaceable Buna-N gasket and stainless steel bolt. A brass ID plate is provided and permanent warning symbol affixed to the cover. The best of the line, made to provide many years of service.

AVAILABLE SIZES: 9", 12"and 12" WITH ALUMINUM COVER!





STEEL WELL PROTECTORS

All sizes in stock and ready for immediate shipment!

For 2"through 28"wells!



- **Environmental Pipe**
- **Environmental Screen and Casing**
- **Oil/water Separators**
- **Carbon Filtration**
- **Chemical Dosing/Injection**
- **Custom Water Treatment Equipment**